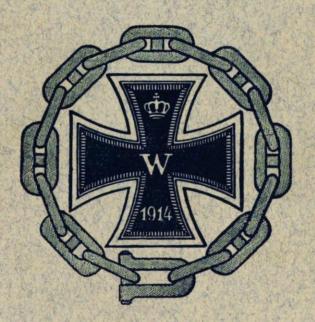
Rriegzur See 1914-1918

Herausgegeben in Verbindung mit dem Bundesarchiv/Militärarchiv pom Arbeitstreis für Wehrforschung



Nordsee/Bd. 7

E. S. Mittler & Sohn/Frankfurt/Main

Digitized by -OOOL

The War at Sea 1914-1918

Published in conjunction with the Federal Archives / Military Archives by the Working Group for Defense Research

The War in the North Sea

Seventh Volume

With numerous maps and supplements

Frankfurt / M. 1965 / Publisher E. S. Mittler & Sohn¹

1

The War in the North Sea

Edited by
Walter Gladisch
Admiral a. D.

Seventh Volume

From the summer of 1917 to the end of the war in 1918

With 5 partially multicolored maps and 9 tables

Frankfurt /M. 1965 / Publisher E. S. Mittler & Sohn²

The War at Sea 1914-1918; "The North Sea", Volume VII

Foreword

After the final volume of the three-part history "The War in the Baltic Sea 1914-18" could be published in 1964, the last of the seven volumes "The War in the North Sea 1914-18" of the official German naval war work is presented to the public. This will presumably be the end of this work, which has been published since 1922 and now comprises 22 volumes (including a map volume and an additional volume). In the past year, Arno Spindler was able to publish Volume IV of the History of the Trade War with Submarines, which he wrote, but its description only extends to the end of 1917. Spindler had indeed collected material for the U-boat trade war from January to October 1918, but the manuscript had been in official British and American custody since the end of the Second World War. It still has to be checked whether an official history of the German U-boat war from January to October 1918 can be written from it.

The files of the naval archive and thus also the documents for the composition of this volume survived the catastrophe of the Second World War. As a result of the consequences of the war, however, the holdings which the undersigned could still use as closed files in London in the years 1957 onwards have now been torn into four very different parts. The bulk of the files, including those about the First World War, were given to the Military History Research Office in Freiburg, and the transfer from London there is said to have been essentially completed by the end of 1965. However, stocks of technical content as well as operations and submarine files remain in London. The Federal Archives/Military Archives in Koblenz have bequests and some other older files, and finally the Secret State Archives in Berlin under Rep. 305 OKM/Admiral Staff keep the logbooks of the Imperial Navy up to 1918 as well as administrative files of the Admiral Staff authority (e.g. budget, equipment of vessels, Maritime Legislation, Organization and Economics of the Navy, Exercises, Experiments and Cases).

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Page VI Forward

The final volume of the North Sea Work has been edited by Admiral Walter Gladisch (1882-1954) like the previous volume VI of the same series. The Department of War Sciences (also a research institute) of the Navy, headed by Vice Admiral Kurt Aßmann, had promoted the publication to such an extent that the first set of galley proofs was available to him as early as September 26, 1941. This volume VII was printed on the basis of this only surviving copy. Although the editing status was far less advanced than in the volume Baltic Sea III published in the previous year, no changes have been made to this volume either, with the exception of very minor stylistic improvements and a few deletions of general considerations that are not relevant. Structure, implementation and style should be preserved in principle in order to emphasize the connection with the work as a whole.

The author was employed as an artillery officer on large battleships during the First World War, and from August 1917 he was an admiral staff officer in the High Seas forces. From there he brought with him experience in service at the front, such as in planning and conducting naval operations, which was of great use to him in writing and assessing warships. This depiction has been edited from the official German war diaries, supplemented by the official British naval war work already printed at the time of writing. Subjects are the activities of the High Seas Forces in the German Bight and in Flanders, mine warfare, events in the air and the final decisions at the end of the war. It is impressively presented how the style of naval warfare changed again in this final phase, how the freedom of movement of the High Seas Fleet was increasingly restricted by the ever-increasing mine infestation, including the last exit routes, how minesweeper and escort formations, with high losses, made a dangerous and on the lead a hopeless fight for a long time. At the same time, the bases in Flanders were being narrowed down in a smaller area until they were blocked and finally evacuated. The mine blockade hindered the submarine warfare by continuing to pose a serious threat to the already long approach routes. This is shown here more clearly than previously known. The last fights of the airships, which were technically overtaken by the aircraft despite further development, the cruiser advances of "Brummer" and "Bremse" and the far-reaching operations of the II torpedo boat flotilla against convoys and the channel guard are vividly described. no less the dramatic nocturnal scenes of sinking escort boats in minefields. The loss of the X. Torpedo Boat Flotilla on 10./11. November 1916 due to mines in the Finnish Bight has not yet been tactically evaluated, so that the losses of three torpedo boats each were repeated on January 20, March 30 and July 10, 1918 in the North Sea and even on August 18, 1944 in the Gulf of Finland once again found their parallel. The historian gets very direct, valuable insights from these events. How biased the operational command was in its judgment becomes clear from the sentence (probably going back to Levetzow) in the operations considerations of the Naval War Staff of October 25, 1918 that the Navy did not need an armistice.⁵

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Page VII Foreword

The facts reported in this volume refute such a view (*). It is to be regretted, of course, that the internal management problems of the High Seas Fleet are dealt with only briefly at the beginning and then hardly at all, and that the history and course of the revolution are not described. The internment and sinking of the High Seas Fleet at Scapa Flow should at least have been mentioned in the outlook, but such a chapter had apparently not been included in the overall plan of the work from the outset.

The unprepared maps of this volume could only be obtained with difficulty. The German Hydrographic Institute in Hamburg provided documents from its archives for the overview map of the North Sea, of which only the southern part is included here for reasons of space and cost, and the signal point map of the German Bight as of 1916 and 1918. Marienfeld is to be thanked for this. The Military History Research Office in Freiburg/Br. only provide documents for the battle sketch on November 17, 1917 (map 4 a) and the situation map of Flanders 1918 (map 3), but unfortunately no mine maps. The mine map in volume North Sea VI and the text sketches 2, 5, 6 (mine barriers Flanders, Dover Strait and English Channel Coast 1917) in volume U-Boot-Krieg IV of the work "Der Krieg zur See 1914-1918" offer a tolerable clue Map 4 of the present volume (The English situation view of the naval battle on November 17, 1917) was drawn up in the History Seminar of the University of Bonn based on the documents provided by Henry Newbolt, Naval Operations Vol V and the printing of the maps was carried out in an exemplary manner by the Military Geographical Office of the German Armed Forces in Bad Godesberg) Colonel Müller, Lieutenant Commander Brohmann and his staff deserve sincere thanks of the locations, also for the largest part of the present volume, the map 5 enclosed in volume North Sea I. For the area of the German Bight is additional number 7, for Flanders add rate number 6 is decisive. Unfortunately, a grid square map as of August to October 1918 could not be obtained. Thanks are due to the Military History Research Office in Freiburg for their efforts. For Flanders, the map on page 334 in Volume North Sea VI is useful.

The editing of the text used the literature published up to the outbreak of war in 1939. The book review of the World War Library in Stuttgart (most recently annual bibliography 1962, contemporary history library, year 34, Frankfurt/M. 1964) should be consulted for the few publications that have come out since then.

^{*)} Critical to this W. Hubatsch: The Admiralstab and the highest naval authorities in Germany 1848-1945. Frankfurt/M. 1958 p. 180 f.⁶

Page VIII Forward

My wife has taken on the task of editing the register of this volume, based on North Sea Volume VI.

It is a special concern of the undersigned to thank all those who helped him to bring this naval history series to a close after more than twelve years of efforts that at times seemed hopeless. The company has received sympathetic support from the Federal Archives/Military Arche in Koblenz, the Military History Research Office in Freiburg/Br., the Working Group for Defense Research and the Library for Contemporary History in Stuttgart, as well as individual personalities from the Navy's high command. The Bonn University Library and my staff in the History Department of the University of Bonn have also taken on the work with zeal. Research into the history of the First World War, which recently began under new auspices, is intended to be given a solid framework for consideration, classification into the general historical context, understanding and assessment.

> Prof. Dr. Walther Hubatsch History Department of the University of Bonn⁷

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Remarks

Clock times - Central European Time, converted to 24-hour time. (GMT +1) Courses magnetic.

For abbreviations, see North Sea Volume I, page XIV f. 14

The War at Sea 1914-1918; "The North Sea", Volume VII

Translator's Notes

This volume was scanned without the Maps, I will add these in future works if they become available. I'm also adding the usual additional material from Volume 1, and the aircraft number to type chart.

R. Denny June 2022

Abbreviations and Explanations. [added from North Sea - Volume 1]

added from North Sea - Volume 1					
A. Gr.	=	Reconnaissance Group.	Ncht.	=	night, at night.
A. L.	=	Reconnaissance Line.	Nm.	=	Afternoon, or p.m.
Armier.	=	Armament (e.g. 8 - 10.5 - 8 guns of 10.5 cm	NE. [NO]	=	Northeast.
		caliber).			
B. B.	=	Port side.	nördl.	=	Northward or to the north of
В. В.	=	Bay.	NW.	=	Northwest
B. d. A	=	Commander of the Reconnaissance Forces.	E [O]	=	East.
Bnk. (Bk.).	=	Bank (shallow water, mostly dangerous for	Östl. Lg	=	Eastern length
Dirk. (Dk.).	_	shipping).	Ostr. Eg	_	Lustern length
cm	=	centimeter	Pzkrz.	=	Armored cruiser
Div	=	Division (association of several war vehicles).	rw.	=	relative [bearing]
Dpfr	=	steamer	S	=	South
dtsch	=	German	S.K.	=	Rapid fire cannon.
engl	=	English	Schlikrz	=	Battle cruiser.
E S	=	detection signal	Schw	=	Headlights or search light
Fl. or. Flott.	=	Flotilla (in the German fleet, 11 to 14 smaller war	sm	=	nautical mile (1852 m).
11. 01. 11011.	_	vehicles, torpedo boats, submarines, etc.).	5111	_	nautear fine (1652 fff).
		venicies, torpedo boats, submarines, etc.).			
Fsch.	=	beacon of lightship	S.M. Krz.	=	His Majesty's cruiser.
F.T.	=	Spark telegraphy, spark telegraphic	S.M.S.	=	His Majesty's ship.
F.d.T	=	leader of the torpedo boats	SE [SO]	=	Southeast
F.d.U.	=	leader of the submarines	St. B	=	Starboard side
G. or Geschw.	=	Squadron (association of 6 to 8 large ships of the	St. B SW	=	southwest
G. of Geschw.	_	line or cruisers as a tactical unit of a fleet).	SW	_	southwest
Greenw.	=	Greenwich (longitude from Greenwich's prime	t	=	ton (1 t - 1000 kg weight).
Greenw.	_	meridian).	·	_	ton (1 t - 1000 kg weight).
Gsch.	=	protected (lightly armored).	T Flotilla.	=	Torpedo boat flotilla
h.	=	Time (hour).	Tpd	=	torpedo
Hfl.	=	Half-flotilla (torpedo boat a formation of 5 to 7	Tpdbt	=	torpedo boat.
1111.	_	torpedo boats).	1 pubt	_	torpedo boat.
Kbt.	=	Gunboat	Tpd. R	=	Torpedo tube (permanently installed launching
Kot.	_	Guillotat	i pu. K	_	tube).
Kl. or. kl.	=	small	Treffen	=	hit or strike
Kl. Krz	=	Small or Light Cruiser	U-Boat	=	submarine
km.	=	Kilometer	U-Hfl.	=	Submarine half-flotilla
Krz.	=	Cruiser	U-Flotilla	=	submarine flotilla
l. or lcht.	=	light	Vm.	=	morning, or a.m.
Lft. Sch.	=	Airship	VIII. Vpl.	=	Outpost line
Lin. Sch.	=	Ship of the line. (battleship)	W.	=	West
M.	=	Noon	Wasserverdr.	=	water displacement (the weight of the water
IVI.	_	NOOII	wasserverur.	_	displaced by the submerged hull is equal to the
					weight of the entire hull and is expressed in "t" at
					1000 kg. each),
M.S.D.	=	Minesweeping Division.	Westl.	=	To the west of or westward
mttgs.	=	at noon.	Dest. [Zerst.]	=	destroyer (torpedo boat destroyer).
mttnchts	=	at midnight	F.d.G.	=	Führer der Geleitfottillen (Leader of Escorts)
mw.	=	Magnetic.	K.d.Flieg	=	Kommander der Flieger der Flotte (Fleet Flight
IIIW.	_	wiagnetic.	K.u.i neg	_	Commander)
N	_	North.	O.b.O	_	Oberbefehlshaber der Ostseestreitkräfte
14	=	INOIUI.	0.0.0	=	(Commander-in-Chief of the Baltic Sea Forces)
O.H.L.	=	Oberste Heeresleitung (Army GHQ)			(Commander-III-Chief of the Battle Sea Forces)
O.11.L.	_	Obersic recresiciting (Ailly Only)	1		

Officer rank equivalents

Germany	UK	USN	Germany	UK	USN
Großadmiral	Fleet Admiral	Fleet	Fregattenkapitän	Commander	Commander
		Admiral			
Generaladmiral	Admiral	Admiral	Korvettenkapitän	Lt Comdr	Lt Comdr
Admiral	Vice Adm	Vice Adm	Kapitänleutnant	Lieutenant	Lieutenant
Vizeadmiral	Rear Adm	Rear Adm	Oberleutnant zur	Sub Leut	Leut (jr)†
			See		
Konteradmiral	Commodore	Rear Adm	Leutnant zur See	Midshipman	Ensign
		(LH)*			
Kapitän zur See	Captain	Captain	Fähnrich zur See	Sea cadet	Midshipman
* I arrian IIa1£					

^{*} Lower Half

I know what you a thinking, the *zur See* is unnecessary, but it is used to designate a line officer with the right to command a vessel, not a technical officer like a Doctor or Engineer.

From Wikipedia

Official printed works

The War at Sea 1914–1918 published by the marine archive / edit. by Eberhard von Mantey; partly ed. by the Department of War Studies / edit. by Kurt Assmann; partly ed. in connection with the Federal Archives-Military Archive of the Working Group for Defense Research / edit. by Walther Hubatsch; partly edit. by the Military History Research Office / edit. by Gerhard P. Groß. Publisher E.S. Mittler, Berlin / Bonn / Hamburg.

Part 1: The war in the North Sea

- Bd. 1. *Von Kriegsbeginn bis Anf. Sept. 1914*. Bearb. von Otto Groos: 1920. XV, 293 S.: Mit 60 Kt., Tab. + Anlagen.
- Bd. 1. Von Kriegsbeginn bis Anf. Sept. 1914. Bearb. von Otto Groos: 2. durchgesehene Auflage 1922. XV, 293 S.: Mit 61 Kt.., Tab + Anlagen (See my site for translation.)
- Bd. 2. *Von Anf. Sept. bis Nov. 1914*. Bearb. von Otto Groos: 1922. XIV, 340, 1 S.: Mit 38 Skizzen, Kt., Tab. + Anlagen. (For my translation, see my site.)
- Bd. 3. *Vom Ende Nov. 1914 bis Anfang Feb. 1915*. Bearb. von Otto Groos: 1923. XIII, 300 S.: Mit 30 Skizzen, Ktn, Tab. + Anl. (For my translation, see my site.)
- Bd. 4. *Von Anf. Febr. bis Ende Dez. 1915*. Bearb. von Otto Groos: 1924. XV, 442 S.: Mit 46 Skizzen, [farb.] Ktn, Tab. + Anl. (For my translation, see my site.)

[†] Junior Grade

Bd. 5. <u>Von Jan. bis Juni 1916.</u> Textband. Bearb. von Otto Groos: 1925. XX, 568 S.: Mit 81 Skizzen, Ktn, Tab. u. Anlagen. (translation forthcoming) https://hdl.handle.net/2027/uva.x001131544

- Bd. 5a *Von Jan. bis Juni 1916*. Kartenband. Bearb. von Otto Groos: 1925. Mit 81 Skizzen, 43 Ktn, Tab. u. Anlagen.
- Bd. 6. <u>Vom Juni 1916 bis Frühj. 1917</u>. Bearb.: <u>Walter Gladisch</u>: 1937. 352 S.: Mit 18 Ktn. u. 19 Skizzen. https://hdl.handle.net/2027/mdp.39015037031088 (For my translation, see my site.)
- Bd. 7. *Vom Sommer 1917 bis zum Kriegsende 1918*. Bearb. von Walter Gladisch: 1965. XIV, 368 S.: Mit Ktn. u. 9 Tab. https://hdl.handle.net/2027/mdp.39015037031005
- Bd. 7. <u>Vom Sommer 1917 bis zum Kriegsende 1918</u>. Kritische Edition; Textband und Kartenschuber. im Auftr. des Militärgeschichtlichen Forschungsamtes bearb. und neu hrsg. von Gerhard P. Groß: 2006. VI, 486 S.; Mit 4 Kt.-Beil. https://hdl.handle.net/2027/mdp.39015037031005 (translation forthcoming)

Part 2: The war in the Baltic Sea

- Bd. 1. <u>Von Kriegsbeginn bis Mitte März 1915.</u> Bearb. von <u>Rudolph Firle</u>: 1921. X, 290 S.: Mit 12 Kt. u. Tab. (For my translation, see my site.)
- Bd. 2. <u>Das Kriegsjahr 1915.</u> Bearb. von Rudolph Firle: 1929. XVI, 385 S. + Mit 62 Anlagen, Kt., Skizzen u. Tab. (translation forthcoming)
- Bd. 3. <u>Von Anfang 1916 bis zum Kriegsende.</u> Bearb. von <u>Ernst Freiherr von Gagern</u>: 1964. XV, 462 S.: Mit 5 Ktn. u. 14 Beilagen. (translation forthcoming)
- Part 3: The submarine trade war (*Der Handelskrieg mit U-Booten*) [also see La Guerre Sous-Marine for books 1 thru 3.]
 - Bd. 1. <u>Vorgeschichte.</u> Bearb. von <u>Arno Spindler</u>: 1932. XII, 269 S.: 6 Textskizzen u. 2 Tab. + Mit 34 Anl. (For my translation, see here.)
 - Bd. 2. <u>Februar bis September 1915.</u> Bearb. von Arno Spindler: 1933. XI, 299 S.: Mit 8 mehrfarb. Steindr. Kt. u. 10 Textskizzen.
 - Bd. 3. Oktober 1915 bis Januar 1917. Bearb. von Arno Spindler: 1934. XII, 400 S.: Mit 16 mehrfarb. Steindr. Kt. u. 12 Textskizzen.

- Bd. 4. Februar bis Dezember 1917. Bearb. von Arno Spindler. Nachdr. [d. Ausg.] 1941: 1964. VI, 559 S.: Mit 15 Kt., 7 Textskizzen u. 44 Minenskizzen. https://hdl.handle.net/2027/mdp.39015027341612
- Bd. 5. *Januar bis November 1918*. Bearb. von Arno Spindler: 1966. VIII, 447 S., 3 Ktn.-Beil. Mit 3 Ktn. u. zahlr. Tab. https://hdl.handle.net/2027/uc1.\$b743794

Part 4: The Cruiser War in Foreign Waters

- Bd. 1. <u>Das Kreuzergeschwader.</u> Bearb. von <u>Erich Raeder</u>: 1922. Mit zahlr. Kt., Tab. u. Anl. (For my translation, see my site.)
- Bd. 1. *Das Kreuzergeschwader*. Bearb. von Erich Raeder: 2. verb. Aufl. 1927. XVII, 459 S.: Mit Kt., Tab., Anl., Abb.
- Bd. 2. <u>Die Tätigkeit des Kleinen Kreuzers Emden. Königsberg u. Karlsruhe,</u> Geyer. Bearb. von Erich Raeder: 1923. XVI, 374 S.
- Bd. 3. *Die deutschen Hilfskreuzer*. Bearb. von Eberhard von Mantey: 1937. VI, 374 S.: Mit 51 Skizzen.

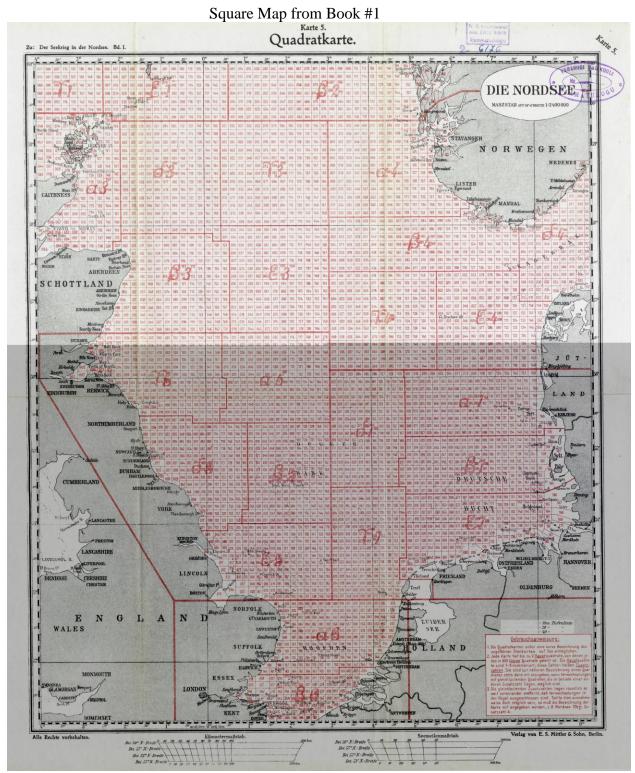
Part 5: The War in Turkish Waters (Der Krieg in den türkischen Gewässern)

- Bd. 1. <u>Die Mittelmeer-Division</u>. Bearb. von <u>Hermann Lorey</u>: 1928 [Ausg. 1927]. XVI, 430 S.: Mit Skizzen, Kt. u. Anlagen. https://hdl.handle.net/2027/mdp.39015030479011 (translation forthcoming)
- Bd. 2. Der Kampf um die Meerengen. Bearb. von Hermann Lorey: 1938. XI, 221 S.: Mit 16 Kt. u. 8 Skizzen. https://hdl.handle.net/2027/mdp.39015030479029
- Part 6: Die Kämpfe der Kaiserlichen Marine in den deutschen Kolonien [The battles of the Imperial Navy in the German colonies]. Tsingtau; Deutsch-Ostafrika. Bearb. von Kurt Aßmann: 1935. XVI, 330 S., Kt. + Register.
- Part 7: Die Überwasserstreitkräfte und ihre Technik. [The surface forces and their technology]. Bearb. von Paul Köppen: 1930. XII, 314 S. + Anlagen.

I have online links for all the volumes except the last two listed.

The War at Sea 1914-1918; "The North Sea", Volume VII

#	Type	#	Туре	#	Туре	#	Туре
E1	Rumpler Taube	30- 39	Ago	64	Rumpler	188- 200	Open
D2	Albatros	40	Albatros	65-69	Ago	201- 210	FF29
D3	Albatros WMZ	41	FF11	70	Ago	211	FF33
E4	Rumper Taube	42	Lohner Type M	71	Ago	212	FF29
D5	Albatros WMZ	43	Curtis	72	Ago	213- 220	FF33
D6	Curtis	44	Spowith	71-72	Brandenburg W	221- 230	Albatros
D7	Ago	45	AEG	73	Union	231- 235	Brandenburg W
E8	Rumpler Taube	46	Oertz FB3	74	Albatros	236- 240	Gotha WD2
D9	Albatros WMZ	47	Rumpler 4E	75	Oertz FB2	241- 253	Rumpler 4B12
D10	Albatros WMZ	48	Aviatik WP18	76-85	FF19	254- 258	Gotha WD2
D11	Albatros WMZ	49	Rumpler 4B11	86-90	Rumpler 4B11	259	Gotha WD3
D12	Avro	50	Rumpler 4B13	91-98	FF29A	260- 273	Brandenburg W
13	Wight	51	Rumpler 4B12	99-100	FF33A	274- 275	FF31
14	Albatros	52	Albatros	111	Albatros	276- 280	Oertz W5
D15	Ago	53	Albatros WDD	112	Ago	281	Oertz W6
D16	Albatros	54	Albatros WDD	113	Ago	282- 284	Trav. F1
D17	Albatros WMZ	55	Albatros WDD	114	Ago	285- 289	Gotha WD1
D18	Curtis	56	Albatros WDD	115	Ago C1w	290	FF29
D19	Ago	57	Brandenburg	116	Lobner (Br.AE)	291- 296	FF33D
20	Albatros	58	Brandenburg	117	FF34	297- 299	Open
21	Albatros	59	Gotha WD1	118	Gotha WD5	300	FF35
22	Albatros	60	Gotha WD2	119	Gotha WD57	301- 400	Open
23	Albatros	61	Gotha WD2	120	Gotha UWD	401	KW Whlm. W1
24	Albatros	62	FF27	121- 186	Open	402	KW Whlm. W2
25- 29	FF19	63	Oertz W4	187	Curtis	403	KW Whlm. W13



Instructions for use:

- 1. The square maps should allow a short description of the approximate location at sea.
- 2. Each map has up to 9 main squares, each of which is divided into 850 small squares. The main squares are numbered 1-9, these numbers are called additional numbers.

The War at Sea 1914-1918; "The North Sea", Volume VII

For a more detailed description of a square, they must always be specified if they can be confused with squares of the same name that are in the area of another.

3. The identical additional numbers are spatially so far apart that confusion is usually ruled out. If, in exceptional cases, this error is possible, the name of the map must also be given, e.g. North Sea 126γ additional number 4. ¹⁵

Can also be read as 126 gamma 6 α alpha, β beta, γ gamma, δ delta, ε epsilon, ζ zeta, η eta,

¹⁵

Gebrauchsanweisung:

^{1.} Die Quadratkarten sollen eine kurze Bezeichnung des ungefähren Standortes auf See ermöglichen.

^{2.} Jede Karte –hat bis zu 9 <u>Hauptquadrate</u>, von denen jedes in 850 <u>kleine</u> Quadrate geteilt ist Die <u>Hauptquadrate</u> sind 1-9 numeriert, diese Zahlen heißen <u>Zusatzzahlen</u>. Sie sind zur näheren Bezeichnung eines Quadrates stets dann mit anzugeben, wenn Verwechselungen mit gleichlautenden Quadraten, die im Gebiete einer anderen liegen, möglich sind

^{3.} Die gleichlautenden Zusatzzahlen liegen r\u00e4umlich so weit voneinander entfernt, daß Verwechselungen in der Regel ausgeschlossen sind. Sollte dies ausnahmsweise dock m\u00f6glich sein, so mu\u00db die Bezeichnung der Karte mit angegeben werden, z.B Nordsee 126γ \u00dc\u00dcZusatzzahl 4.

1. The overall war situation from the start of unrestricted U-Boat warfare to the fall of 1917

Relationship between land and sea wars

While trench warfare had developed in the North Sea between Terschelling and Hornsriff, in which the High Seas Fleet struggled tenaciously to keep routes to and from the German Bight open to the U-boats deployed against the lines of communication with the English island, the land war in 1917 was marked the defense against expected enemy large-scale attacks. The U-boat war took time to have an impact. It was therefore important to prevent, under all circumstances, a breakthrough by the enemy on the land front and a shift in the overall war situation to Germany's disadvantage. The heavy fighting of 1916 had made it clear that the defensive task could only be accomplished if all forces were tightly combined and the most favorable defensive conditions were created. In close connection with the beginning of the U-boat war, the OHL. therefore decided to clear the German arc of the front between Arras and Soissons, which was advancing towards France, in mid-March 1917, to withdraw the front to a well-prepared position, the Siegfried Position, and in a 15 km plan to carry out the destruction prepared in a wide strip in front of the new position (1).

Even at the beginning of unrestricted submarine warfare, it soon became apparent that preventive protective measures against Denmark and Holland were not necessary. These powers had reconciled themselves to the changed situation brought about by unrestricted submarine warfare. On April 6, 1917, after breaking off relations at the beginning of February 1917, the United States of America had declared that a state of war existed between the United States and Germany. It had to be expected that the forces of the United States would make themselves felt in the west by deploying American divisions.

	1) Erich Luoendorff, "My War Memories". 1914 - 1918, 5th edition Berlin 1920,
1	p. 320 The World War 1914-1918 Vol. XII. Berlin 1939. P. 64. 16

Page 2 1. The overall war situation

A decisive disruption to the American troop transports was not taken into account from the outset, because the submarine "could not specialize here, but could only shoot down what came before the gun or rather the torpedo tube" (1).

If it was not clear in detail in which direction the enemy's main thrust in the west would be directed, it was obvious that British efforts would aim at the Flanders front, to press against the submarine base in Flanders from land, if possible to get hold of it.

The Russian revolution that broke out in March 1917 came as a surprise to the German political and military leadership, as well as to our opponents; if events in the east had been anticipated in good time, they would have had a decisive influence on the war plan for 1917, including the decision on unrestricted submarine warfare from the outset (2). The changed situation in the east led to the decision of the OHL in June to clean up the war in the east and bring it to a definitive end. For the West, events in the East later had the effect that divisions released in the East could be used for defensive battles in the West.

In April and May 1917, the offensive operations near Arras and on the Aisne-Champagne front, which the French Generalissimo General Nivelle prepared and carried out with great hopes, led to local successes for the enemy, but in the end the massive attacks by the English and French failed with the heaviest losses, which far exceeded those of the German defenses. "After their great failure in April and May and the loss of Russia which has occurred so far, England and France found themselves before a new situation. They decided on a mighty attack to win in 1917. At the same time, however, they also wanted to ensure that their final success in 1918 was certain. They focused their attack on Ypres to capture the German U-boat base in Flanders" (3)

The failure of the Anglo-French offensive in the spring of 1917 led to the replacement of General Nivelles by General Petaln. In addition to the externally visible effect of the large-scale attacks, which collapsed with enormous blood losses, signs of disintegration had appeared in the French army in the early summer of 1917, which called its unrestricted use into question. These signs of disintegration were primarily triggered by the blood sacrifices felt by the troops as useless, but also by the revolutionary poison that appeared visibly in the Russian division used in France, may not have been without influence on the further spread of revolutionary tendencies in the French army. Mass desertions and disobedience by entire divisions - including tried and tested attack troops - were countered by energetic intervention by the military and political leadership; this serious crisis eventually turned into a process of recovery for the French army.

¹⁾ The War at Sea 1914-1918. North Sea VI. Berlin 1937. p. 171.

²⁾ The war on the sea 1914-1918, U-boat war III, Berlin 1934, P. 377/78.

³⁾ Ludendorff. "My War Memories". p. 399. — The World War 1914-1918. Vol. XIII. Berlin 1942 (delivered to Frankfurt/M. 1956), p. 58 f. 17

Page 3 The enemies offensive plan

This was possible because the French government had taken all measures to suppress the revolutionary activities no less purposefully than the French army command and had known how to ensure that events remained hidden from the outside world. What was happening in the French army went unnoticed on the German side and only became known after the crisis had been overcome.

General Petain now carried out the war plan he had considered correct from the start, to conserve forces, to recover the troops as far as possible and to make all material preparations in order to seek the decisive attack and breakthrough on the German front after the American units had arrived. The English attacks against the Flanders front, which began in June 1917 with the Battle of Wytschaete and continued in the heavy battles at Ypres from June to mid-November in the toughest offensives carried out by General Haig against the Flanders submarine base, remained unsuccessful in their operational goal.

Effects of the Russian Revolution

The political impact of this revolutionary event was as unfavorable as the military relief brought about by the Russian Revolution. In Germany, the Russian revolution struck ground that was particularly open to political disintegration. At that time, the mood in Germany was still full of confidence in the final victory. But the effects of the land and sea blockade, which were gradually becoming apparent, and the government's helplessness in the face of these phenomena, had created a popular mood outside the fighting front which offered a good field for political turbulence. General Ludendorff made the following statements about that time in his "War Memoirs" (p. 355):

"Looking back, I can say that our decline obviously began with the outbreak of the revolution in Russia. On the one hand, the government was concerned about similar conditions as there, on the other hand, the feeling of inability to fill the broad masses of the people with new strength and to steel their willingness to war, which was dwindling for countless reasons."

Given the nature of the situation in the Navy, which brought front, base and homeland into direct contact in the bases, the opportunity for political influencing of the ship's crews was particularly favorable. The wait-and-see attitude of the Fleet and the routine activities of the squadrons of the line, which were seldom interrupted by acts of war, depressed the mood and warlike spirit more and more over time; the necessary, but unnecessary and boring, day service to maintain the highest level of combat capability paralyzed the freshness of the crews, some of whom had served six years, during the almost three-year war; the monotonous, albeit sufficient, diet, which plays its special role in the uniformity of life on board, offered no compensation and could contribute little to invigoration.¹⁸

1. The overall war situation

Strong changes in the younger officers of the large ships, who are important for discipline and direct contact with the individual man, imperceptibly loosened the bond between the officer corps and the crews (1).

Since the beginning of 1917, political agitators had succeeded in finding a confidant on the fleet flagship "Friedrich der Große" who tried to work politically in the interests of the U.S.P.D.* to bring about a mutual peace. This movement was originally limited to the Battleship "Friedrich der Große". From there it was relayed to a number of other ships.

At first an attempt was made to recruit members for the U.S.P.D. to advertise with the purpose of achieving an early peace through work stoppages, insubordination and strikes. With systematic processing it was not difficult to find members of the crew who believed they had reason to be dissatisfied with alleged or existing deficiencies in food and official treatment. The movement had spread mainly among the technical staff, but had also found a few adherents among the sailors. Over time, political cells that knew how to get in touch with one another were formed from the rations [or housekeeping] commissions, the creation of which had been ordered from a higher authority at that time. Direct contact with the Reichstag faction of the U.S.P.D. provided the crew members involved with a picture of the U.S.P.D.'s objectives, tailored for the soldiers' understanding.

Because of these ideas, the mass entry of soldiers into the U.S.P.D. and initiated the creation of written declarations of entry in order to support the anti-war movement at the peace conference in Stockholm by presenting a large number of members of the Navy. A role played by the belief of some soldiers that the work for the war and the weapons should be suspended at the same time by all enemies of Germany, i.e. in the opinion of the navy members no damage to the fatherland could occur since his enemies would proceed in the same way. They were convinced that on a certain day, when the watchword was to be issued in Berlin, there would be a general strike in the armaments industry, in all military factories, in the army and the navy, which would bring about the establishment of a state of peace of its own accord. Some reckoned that at the same time a similar thing would take place in our enemy's army and navy.

These were the general conditions and moods that led to insubordination on ships in the fleet in the summer of 1917. The first sign was when 137 men disembarked from the cruiser "Pillau" in the afternoon of July 20, 1917, stayed in an inn on land and returned to the ship at 5 p.m. The incident was reported by the ship's superiors not taken tragically, but seen by the otherwise very good crew as an ill-considered silly prank.

¹⁾ North Sea VI. pp. 130 and 254.

^{*}U.S.P.D. the S.P.D. part is likely the Socialist Democratic Party founded in 1863.

Page 5 Disciplinary offenses in the High Seas Fleet

It was much more momentous that on the morning of August 1, 1917, 49 men on the battleship "Prinzregent Luitpold" left the ship for insignificant reasons and stayed away for about two hours. When 11 ringleaders were punished for these "trippers", about 400 men left the ship The crew boarded the ship at 7 a.m. the following day and forced their way out of the shipyard. They held meetings in the tavern, where the purpose of the march was to free those arrested and talk about the independent social democracy and its successes.

On August 16, 30 to 40 men were refused service on the battleship "Westfalen" while taking over coal, but this was remedied by the intervention of a staff officer.

At the beginning of July, the crew of the liner "Friedrich der Große" had eaten the bread intended for the next day during a night shooting exercise that had lasted until 1 a.m. Since they did not get any more for it the next morning, they did not report for duty. However, after energetic intervention by the chief officer, they then appeared on deck. This incident was considered so minor that it was neither prosecuted nor reported to the superior.

Apart from the cases mentioned, no notable disciplinary offenses occurred on any ship of the High Seas Fleet in 1917 before or after the dates mentioned. The examination of other misdemeanors, which are listed in foreign or German literature, has shown that breaches of discipline in no case went beyond the framework of normal irregularities, as they naturally arise in times of limited rations or monotonous work.

The Chief of the High Seas Forces, Admiral Scheer, cracked down on these incidents and uncovered the internal connection between the activities, especially with the U.S.P.D. The penalties imposed were not imposed on any Navy personnel for their political views or for campaigning for a political party; rather, the verdicts were for serious military offences, in particular incitement to insurgency treasonous to war and military insurrection. Mutiny, disobedience, persistence in disobedience, and disobedience coincided with the main crimes. Taking into account mitigations, the following court convictions were issued:

Death penalty

Penitentiary sentence of more than 10 to 15 years

Prison sentences of more than 5 to 10 years

Prison sentence of more than 5 to 10 drive

Prison sentence of more than 2 to 5 years

Imprisonment of more than 1 to 2 years

Imprisonment of more than 1 year

against 2 people

against 7 people

against 21 people

against 24 people

against 24 people

What could be accomplished through judicial penalties and disciplinary sanctions had been done within the Navy. In addition, all departments endeavored to identify causes of particular dissatisfaction and, as far as this was possible under the given circumstances, to eliminate them. ²⁰

1. The overall war situation

The position of the opponent

Before Admiral Jellicoe took office as First Sea Lord, the possibilities of effective defense against submarine warfare had been examined in detail. In addition to the measures taken, the tried and tested method of warding off commerce destroyers by the system of convoys in earlier naval wars had been considered, but rejected by the expert representatives of the Admiralty. The Admiralty, at a meeting with the War Committee on November 2nd, in which Admiral Jellicoe was still present as Commander-in-Chief, took the position that attempts already made to have one or more merchant ships escorted by warships should be used, had had unfavorable experiences. Difficulties were expected when larger convoys were assembled from a small number of warships, since the merchant ships could not drive close together and a larger convoy would therefore take up too much space to be escorted by a few warships. Since the overall speed of a convoy must conform to the slowest ship, the disadvantages involved have been considered greater than any resulting advantages. At least the Admiralty said they would keep an eye on the issue. The only practical outcome of this meeting was the creation of an antisubmarine warfare office, as proposed by Admiral Jellicoe.

In January, 1917, a memorandum of the Admiralty was presented to Admiral Jellicoe, repeating the reasons discussed at the meeting of November 2nd, and stating that the large number of ships formed in convoys was inimical to the attacking U-boat and its torpedoes offers a disadvantageous increase in the target size. The advantages of the armed merchant steamer operating alone were expressly emphasized.

Admiral Jellicoe concluded from these statements that the introduction of the convoy system was out of the question at the time, but he realized that this method would have to be used if the measures taken hitherto did not have the necessary success. He decided that convoys might be necessary in the Atlantic at the moment in order to protect shipping against the auxiliary cruiser "Möwe", which was active in the Atlantic convoys was the presence of numerous war vessels not available at the time.

The provision of the destroyers, which were primarily necessary for escort protection, affected the use of the Grand Fleet, the defense of the Dover Strait and thus the overall warfare in the North Sea. At that time, the distribution of the destroyer forces was roughly as follows: the Commander-in-Chief of the Grand Fleet could count on about 85 to 90 destroyers being on standby at all times, a number that was by no means quite sufficient.²¹

The convoy system

In addition the Harwich destroyers (about 50 units strong) they were more or less split up to reinforce the too weak Dover forces and to secure the Hoofden, a remainder being used to secure Dutch-English trade. About 90 older and smaller destroyers were stationed at Scapa, the Humber, the Nore, Portsmouth and Devonport for local anti-submarine warfare. By extracting the best of these, about 20 units could be used for offshore escort service and 20 to 30 smaller destroyers for the channel transports between Cape Lizard and the Isle of Wight. All in all, the number of destroyers available was by no means large enough to protect convoys on several Atlantic routes, provided that the anti-submarine defenses on the coast were not significantly reduced. No advantage was seen in such measures, especially since the organization of merchant shipping initially seemed to offer insurmountable difficulties for the convoy service.

Admiral Jellicoe, however, did not fail to clarify the question further; he acquainted a number of experienced ship-masters with the nature of the question, and heard their views. These captains considered it impossible to hold position in closed formation with merchant ships: the merchant ships were not equipped with sufficiently accurate engine telegraphs, unsuitable command connections between bridge and engine, as well as the equipment in the engine rooms themselves did not seem to offer the prerequisites for the merchant ships to keep their position precisely. The captains preferred to sail alone, at most in twos.

More and more reasons were given against the convoy system: the necessity of convoy organization could lead to the fact that the utilization of the individual vessels in seafaring would be lower because of the longer stay in port. A moment of danger was also seen in the breaking up of the convoy: immediately after this point in time, the attack point for the enemy submarines would be particularly large and the protection provided by the armed forces would then not be sufficient. The danger of mines was also assessed as particularly serious because the enemy would have observed the main routes very soon. Difficulties were expected with the large neutral states, which might hinder the assembly of convoys in their ports.

The increasing sinking of merchant ships by U-boats now caused Lloyd George, who was appointed Prime Minister on December 7, 1916, to approach the question of the convoy system energetically. In the opinion of Lloyd George, the reasons advanced by the Admiralty against the convoy system had not been laid down by officers experienced in U-boat service; he even alleged that the Admiralty possessed memoranda by experienced U-boat officers explaining "why it was difficult for a U-boat to attack a convoy" (1).

¹⁾ David Lloyd George. "My share in the world war". Vol. 2 p. 74. German translation (1936).²²

1. The overall war situation

A memorandum prepared by Sir Maurice Hankey on behalf of Lloyd George dealt in detail with the reasons given by the Admiralty against the convoy system and finally achieved that at least attempts were made to stem the loss of merchant ships by convoy. The most important arguments against Hankey's forward-looking memorandum were as follows:

"The shortage of imports automatically ensures that the ports will not be blocked, as feared by the introduction of convoys. The time wasted by convoys is no greater than the Admiralty's recommended plan of taking detours and closing certain ports from time to time. The nationalization of merchant shipping will be the best means of enforcing the necessary discipline to keep order in the convoys, and of enforcing merchant shipping with officers to teach station-keeping. In the course of the war, far more difficult tasks than holding positions were solved by merchant ship seamen. The organization of the convoys must, if possible, put together ships with the same speed. Careful organization of naval forces will overcome the difficulties of providing convoy naval forces (1)".

In summary, the memorandum said: "The enemy cannot possibly know the day or hour the convoy will arrive; nor can he know the route the convoy is taking. The most dangerous and narrowest passages can be passed at night and the water chosen should be as deep as possible so that no submarine mines can be laid. Minesweepers or vehicles equipped with nets can drive ahead of the convoy. The most valuable ships can be placed in the safest spot. Neutral vehicles and other unarmed vehicles can be placed under the protection of armed vehicles. The enemy submarine will know that it is not attacking defenseless prey but that a battle is inevitable in which it may be defeated. Any hope of a successful surface attack would have to be abandoned immediately.

Apparently, the application of the system would afford the merchant ships themselves great opportunities for mutual aid, quite apart from the protection afforded by the naval forces. Instead of encountering fire from a single gun aboard individual ships, the enemy might be exposed to fire from, say, ten guns spread across twenty ships. Each merchant ship could carry depth charges and, in addition, two ships each could tow explosive charges that are detonated electrically. One or two ships with paravanes could protect a dozen ships from the mine threat. Special salvage ships could accompany the convoy to assist those ships that encounter a mine or are torpedoed without immediately sinking and in any case save the crew (2)."

¹⁾ Henry Newbolt, Naval Operations V (History of the Great War, London 1931), p.11 ff.

²⁾ David Lloyd George. "War Memoirs" London 1934 III. p. 1154.²³

The convoy system

The memorandum presented by Lloyd George to the Admiralty initially only had the result that the matter was further investigated. It was not until March that circumstances arose which caused the Admiralty to look at the question differently. During the last six weeks the supply of coal to northern France had been effected by the convoy system, and if experience in this did not seem to justify the introduction of a regular system of convoys, the reduction in casualties had been remarkable just at a time when the Losses elsewhere were mounting at an alarming rate. There was also the outcome of a conference on Scandinavian trade in Longhope on April 3rd. At this point the question had been raised as to how the heavy losses in the Scandinavian trade might be reduced. The officers responsible for this had unanimously voted in favor of convoys. At first, however, the view was still taken that the number of naval forces must be about the same as that of the merchant ships being escorted. There was therefore no lack of voices on the part of the commanders of the individual areas who gave reasons against the escort in the Scandinavian service. The result of the Longhope Conference, however, was that for the Scandinavian trade, for which special conditions were considered to be present, convoy should be used as an experiment.

U-boat losses continued to mount. Up until April 23, 1917, the question of escort had made little progress, especially since experience in Scandinavian traffic did not seem to be very favorable, since two steamers in different escorts had been torpedoed. The main reason Admiral Jellicoe continued to evade Lloyd George's urging for general acceptance of the convoy system was the shortage of torpedo boat destroyers. By then, however, America had entered the war, and President Wilson had urgently promised that the United States would support the war by any means necessary. America agreed to immediately provide a number of destroyers, the first of which arrived in England on May 4, 1917. It had also turned out that the Admiralty had made false assumptions when considering how many convoys to expect. In cooperation with the Ministry of Shipping, tables were constantly compiled which registered and published the number of arrivals and departures of ships on a weekly basis. All coasters from 300 tons were included in these numbers, in order to have a propagandistic effect on opponents and neutrals, since the number of casualties would be extraordinarily small compared to these traffic figures. The tables had indicated that there were 2,500 arrivals and departures a week from English ports. It is understandable that, based on these numbers, convoys would have led to an impossible drawdown of naval forces. The real number, which was only allowed to count the ocean trade, shrank to 120 to 140 weekly.

In this state of affairs the question had to be judged differently by the Admiralty. With the help of the American destroyers and an increase of 15 destroyers by new ships by the end of July, the practical possibility of carrying it out took on a significantly different shape. ²⁴

1. The overall war situation

Now that Lloyd George, following a decision by the War Cabinet on April 25th that the Prime Minister should again contact the Admiralty to make progress in the fight against submarines, Turning to Admiral Jellicoe, the Admiralty was in principle ready to introduce the escort system after Admiral Duff, head of the anti-submarine warfare office, had made a corresponding proposal to Admiral Jellicoe.

The final agreements between Lloyd George and Admiral Jellicoe were now made, which Lloyd George summarized as follows in a memorandum dated April 30, 1917:

"The detailed findings of the Admiralty have resulted in a complete change of view in relation to the convoy system. While the Admiralty is by no means particularly fond of this system, it certainly wishes it to be introduced on an experimental basis for the following reasons:

- 1. With the entry of the United States of America into the war, it will be possible to provide the sufficient number of naval forces for the escort service.
- 2. The previous anti-submarine defense of merchant ships sailing individually by zigzagging and blinding at night has proven to be insufficient.
- 3. The number of ships to be escorted turned out to be much smaller than assumed.
- 4. If the casualties of merchant ships have hitherto not been considered large enough to justify an experiment, recent calculations show that the convoy system would perform better even if three ships were shot out of each convoy."

At the end of March 1917, when the United States was about to enter the war, Admiral Sims, President of the Naval Academy at Newport, had received orders to hasten to England to study the situation at sea and to determine the best and most appropriate route cooperation in naval wars would be possible as soon as possible. Immediately after his arrival in London, Admiral Jellicoe gave the American admiral a sober account of the situation that had arisen as a result of the U-boat war. Admiral Sims got a clear, if surprising, picture of the heavy merchant ship losses. It was made clear to him that an increase in the naval forces required to combat U-boats, primarily destroyers, was the first and most urgent necessity. He was also informed of the Admiralty's wish to strengthen the Atlantic forces by setting up a cruiser squadron to hunt down auxiliary cruisers. Further support was requested in the Gulf of Mexico, the American West Coast and the Far East. Admiral Sims realized that submarine warfare was crucial and that its focus was where the trade routes in the eastern Atlantic met.

The wishes expressed for the submarine defense were energetically fulfilled. On May 4, the VIII. Destroyer Division arrived, on May 17, the IX. Destroyer Division, on May 24th the VI. Destroyer Division and on June 1st the V. Destroyer Division in Oueenstown.²⁵

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Page 11 American destroyers in the North Sea

The provision of these 24 destroyers two months after America's entry into the war meant a significant reinforcement of the North Sea forces. Hand in hand with a reorganization of anti-submarine forces in English waters went a redistribution of air forces on the French and English coasts between Dunkirk and Brest on the one hand and between New Haven and Portland on the other. The boundaries of the French and English zones were precisely defined. Common signal books were established to report sighted U-boats, not to lose sight of them, and to be pinned down by air and sea forces as they crossed from one zone to another.

While all preparations for experiments with convoys were made in England and in mid-May the first convoy with a strength of 16 steamers and a speed of 6½ nm was carried out from Gibraltar to England without incident, the American naval authorities initially opposed the English request in May to allow a convoy of 16 to 20 ships to be lowered from America under the protection of naval forces. This American objection was apparently based on the British Admiralty's negative attitude towards convoys, which was reported by Admiral Sims at the time. The American convoy did not go through, and the ships crossed the ocean one at a time without protection.

In the course of the summer, the convoy system was further expanded, with the result that the convoys were led from the assembly port by high seas forces (cruisers or auxiliary cruisers) until they were taken over by coastal forces. Special arrangements were made for certain European routes, e.g. observing Gibraltar convoys arriving and departing from destroyers.

Experimental convoys and those that later ran regularly were completely successful. The convoy system eventually became the most important tool in the fight against the German U-boat threat. It made it extremely difficult for the U-boats to find targets grouped together in a small area, and attacking the protected convoys with artillery fire was hardly possible. The possibility of attacks on convoys by surface forces soon affected German light naval operations. ²⁶

3. Mine warfare in the German Bight

(From July 1917 to late 1917)

On the high roads of sea traffic, in the real operational area of the U-boats, the fight against the intensified enemy anti-submarine measures had to be fought out by the German U-boats alone. On the other hand, in the struggle against the mine blockade, through which England was striving to get to the root of the evil of the U-boats, the High Seas Fleet, from the minesweeper to the capital ship squadrons, stood directly by the U-boat. The operational freedom of submarine warfare stood and fell with the unrestricted preservation of mine-safe entry and exit routes from the German Bight and the Baltic Sea to the operational area in the open sea.

The English mining activity in the border area of the German Bight, which was intensified from the beginning to May 1917, was mainly directed against two routes: in the north against the approach from Hornsriff to the German Bight and in the west against the path between the Ems and Terschelling. Both routes were severely restricted by enemy mines, but the Nordmandstief tributary along the Danish coast to the north and a route along the Dutch coast to the west remained available for U-boats and surface vessels. Safe exit routes from the middle of the German Bight and from Amrum to the northwest were not available at the end of May due to the lively mining activity; the work on the route from the Ems to the north-west (Yellow route) had to be promoted by all means, especially in order to have a run-out route for surface forces that was not visible to the coast (1).

English mining activity dropped sharply from June to December 1917. Only in August 1917 were larger barriers laid with a total of 2,640 mines compared to 2,180 mines in the remaining six months between June and December 1917. In September 1917, the first mine barrage with lead cap mines thrown by surface forces was established. It can be assumed that from this point in time deliveries - at least in limited quantities - with the new, much more effective type of mine began and the mine stocks of old mines with the strong output in the August 1917 were nearing their end.

¹⁾ North Sea VI, p. 277 and map 16. — see also maps 1 and 2 in the appendix to this volume.²⁷

Page 13 English barriers off Hornsriff and Terschelling

The mine warfare in the border area of the German Bight only increased again at the beginning of 1918, with a sharp increase up to the peak between April and July 1918.

From June 1917, the English mine attack was again directed against the natural approaches to Hornsriff and Terschelling. On the coastal arc between Hornsriff and Terschelling, the mine attack always began where German efforts to break through a route had become apparent, i.e. as soon as a more or less mine-free exit and entry route was compromised. The documents for this provided the English with long-distance reconnaissance, which was constantly advanced in the form of submarines up to the edge of the mine belt.

The attack against the *northern approach to the German Bight* was not very sustained until the end of 1917. From June to December 1917, five mine barrages were thrown here: on June 1 and 14, 1917 by the English submarines "E 45" and "E 46", barrages 45 and 47 with 20 mines each, on July 24, .and 20 August by the surface ships "Abdiel", "Blanche", "Bellona", "Royalist" and "Telemachus" the three barriers 53, 55 and 57 with a total of 920 mines. The barriers 45 (20 mines) and 57 (320 mines) were not touched by German naval forces and practically not apparent. Even barrier 47, which was only opened three months later by the 6th Minesweeping Half-Flotilla (Kapitänleutnant d. R. d'Ottilie) when checking a slip-out point of the 9th Torpedo Boat Half-Flotilla (Kapitänleutnant Müller) and cleared together with the I. Minesweeper Flotilla (Korvettenkapitän Bobsien) was of little importance in terms of its location.

While the other minesweeping work in the north consisted primarily of the II Minesweeping Division, which was based on List, controlling the tributary waters of the Nordmandstief and areas suspected of being mines, the auxiliary minesweeping flotilla of the northern approaches and Torpedo Boats Half-Flotillas tried to identify newly thrown barriers by stab trips [Stichfahrten], the submarines were regularly guided along the coast by minesweepers to Lyngving. When the boats of the 3rd Auxiliary Minesweeping Half-Flotilla, "Rinteln" and "Admiral von Schröder", returned from the U-boat escort after midnight on the night of July 24/25, they sighted English destroyers with three funnels 10 nm south of Lyngvig, approaching from the stern at a distance of 400 m and passing south at high speed, supposedly four to port and two to starboard of the boats. It was doubtless the English minelayers "Blanche", "Bellona", "Royalist", "Telemachus" who laid barrier 53 that night. The English mine ships did not attack, they were probably still loaded with mines. The B.d.U., who concluded that mines were infested again from reports of sighted enemy forces, sent the 2nd Torpedo Boat Half-Flotilla (Kapitänleutnant Paul) from List to search for airship reconnaissance as far as Lyngvig with equipment. On July 25 at 6 a.m. the 2nd Torpedo Boat Half-Flotilla established the new barrier, and on the same day the II. Mine Clearance Division (Korvettenkapitän Altvater, August) began work on the barrier.²⁸

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Page 14 2. The mine warfare in the German Bight up to the end of 1917

This had apparently become known to the English, for early on July 30 flight reconnaissance reported English naval forces west of Lyngvig, which were probably intended to advance against any minesweeping forces.

Similar observations were made soon after in August. Early on August 21 "L 23" (Oberleutnant z. S. Dinter) and List's aircraft "874" (Flugzeug-Ob. Matr. Deutschmann, Leutnant d. R. d. M. A. Longolius) sighted northwest of Lyngvig enemy cruisers and destroyers, whose advance probably with related to the fact that on the night of August 20th/21st "Abdiel", "Blanche", "Bellona" and "Royalist" had thrown the barrier 57 consisting of 320 mines. "L 23" and aircraft "874" made contact with the enemy at about 7 o'clock and made several reports about the enemy group consisting of about 4 light cruisers and 15 destroyers. At around 8 o'clock there were no reports, aircraft "874" landed in List. Aircraft sent out to search for List and the 1st Torpedo Boat Flotilla (Korvettenkapitän Dithmar) sent north did not initially find any trace of "L 23". It was only in the evening that plane "1098" (Lieutenant d.R.d.M.A. Gottsauer, Flight Mate Steindlmüller) reported that it had found wreckage from "L 23" 25 nm WNW of Lyngvig. The contact concerned the 1st Light Cruiser Squadron, which had encountered "L 23" and a seaplane on a reconnaissance mission on the Danish coast near Lyngvig in the early morning of August 21. "L 23" kept in touch behind the English naval forces steering north. Off Lodbjerg the English formation turned to the wind and steered about two miles on the new course. The commander then gave the order to the rearmost "Yarmouth" to launch her seaplane. "Yarmouth" was the first warship to be fitted with a seaplane, namely a "Sopwith pup" the pilot was Flight Lieutenant B.A. Smart — it was also his first launch from the Yarmouth. The plane went to an altitude of 2000 m, and managed to set fire to the airship at a distance of about 20 m from below. "L 23" fell while burning. The aircraft had been in the air for almost an hour from the start until it was picked up again by a boat. It was the first visible combat success of a seaplane launched from a cruiser.

On September 1, just below the coast near Lyngvig, the two submarines "U 80" (Kapitänleutnant Amberger) and "UC 55" (Oberleutnant z. S. Rühle von Lilienstern) were to be picked up by the four trawlers of the 3rd Auxiliary Minesweeping Half-Flotilla "Krefeld" (Oberleutnant z. S. d. R. Thuns), "Heinrich Bruns" (Obersteuermann Höppe), "Rinteln" (Leutnant z. S. d. R. Gladow) and "Admiral von Schröder" (Steuermann d. R. Wichmann). Shortly before 5 o'clock, after sighting the U-boats, the trawlers were just about to deploy the device when about ten enemy cruisers and destroyers came into view from the north-west. The trawlers approached Danish territorial waters at full speed, but were fired on and badly damaged. At about 6 o'clock they were beached about 10 nm south of Lyngvig. Oberleutnant z. s. d. R. Thuns reported the September 6 incident from Copenhagen:²⁹

Page 15 English destroyers destroy escort boats

"On September 1, 1917 I was under orders with the boats "Krefeld", "Heinrich Bruns" "Rinteln" and "Admiral von Schröder" "U 80" and "UC 55" to be observed at 4 o'clock at Havrig Beacon and to be escorted south. The boats were in position at the appointed time. Shortly before 5 o'clock, it was already quite light, both submarines were sighted. "Rinteln" and "Admiral von Schröder" received the order to escort "U 80", which was a little further north than "UC 55". The two boats steamed north to meet the submarine.

While I was in communication with "UC 55" and wanted to deploy the device, clouds of smoke were reported to me in the north-west. I immediately informed the U-boat and left after I had understood the signal and noticed that the northern squad also saw the clouds of smoke, with "Heinrich Bruns" across the coast to get into the territorial waters for the time being. At about 5:50 o'clock the enemy destroyers, which could now be seen, first opened fired on "U 80" and apparently covered it up well. Made F.T. Kr. signal: "Enemy destroyers in . . . will be fired upon."

After I had crossed the sovereign border by about 1 nm with "Heinrich Bruns", I set course south, assuming that the enemy might only fire at the U-boats and that we could escape within sovereign waters. The second squad followed suit. It was not possible to fire outside of territorial waters because the boats have their guns (8.6 L/35 or 5.2 cm) on the forecastle and there was not enough time for this. In order not to take any action in Danish waters, and since only a chance hit would have been successful, I did not fire within the sovereign border, but the gun was manned to the last moment. The other boats did the same.

The destroyers now turned their fire on the boats. "Heinrich Bruns", who was a little behind "Krefeld" and was still outside territorial waters, was hit and burned. I then set course for land and gave an F.T.: "Run with 4 boats onto the beach." "Admiral von Schröder", who made the boat ready to be launched, was smashed by a shell. "Admiral von Schröder" and "Rinteln" went ashore first. The crews managed to reach land by boat and swimming. After that, "Heinrich Bruns" and shortly afterwards "Krefeld" came up. Here, too, the crews managed to come ashore. According to some commanders, the people initially lay down exhausted on the beach, but since the English were now shooting at the people lying on the beach and still in the water with machine guns, to flee behind the nearest dune line while the boats themselves were still being heavily shelled with shells of various calibres. One of the English torpedo boats was up to 200 m ashore and swept the sea and coast from south to north with machine guns. The other boats did the same.

The people lying behind the dunes were shot at with shrapnel. I saw nothing of the events reported above, for, as far as I can tell, I was the last to reach land by swimming after the English had broken off the engagement, which lasted about 25 to 30 minutes.³⁰

Page 16 2. The mine warfare in the German Bight until the end of 1917

After the battle was broken off, Obersteuermann Höppe saw three destroyers steaming away to the west and seven to the north-west at high speed. The destroyers are said to have had three funnels and a high mast.

Once the report has been received, all secret items have been destroyed. The inspection showed that all the people were present except for the chief stoker Kleve ("Admiral von Schröder"). While outside there was a powerful swell and wind WNW force 2 to 3, there was a strong surf on land, which initially made it impossible to come back on board. The people were now distributed among the houses lying behind the dunes and were given dry clothes and plenty of food and drink. After stocking up on dry clothes I went back to the scene of the accident and could now see two submarines, which were undoubtedly the ones which should be directed by me. According to reports received, "Krefeld" had two shell hits in the hull, funnel probably punctured by 3.7 cm.

"Heinrich Bruns" had 7 to 8 hits and was on fire. A depth charge detonated and took away part of the forecastle with the gun. "Rinteln" had 3 hits, the ship was on fire. "Admiral von Schröder" 8 to 10 hits (the main mast with the flag had been shot away). Coming on board was still out of the question.

The ships were abandoned under heavy English fire. The crew behaved perfectly and calmly. Abandoning the boats was absolutely necessary in order to save as many lives as possible and was the only way out."

"U 80" and "UC 55" did not attack because the water was too shallow and there was a risk of mines. Aircraft "858" (Flugzeugobermatrose Deutschmann, Flugobermaat Schramm) and "888" (Flugzeugobermatrose Schnichels, Flugzeugmatrose Harloff) had bombed the destroyers and had been fired at with shrapnel and grenades. Aircraft "858" had already reported to the English naval forces at around 6 o'clock and kept the fleet command continuously informed about the course of events. The Fleet Chief expressed his appreciation to the crew of this aircraft for their excellent reconnaissance work and their willingness to attack.

As a result of this attack, the northern coastal path (path white) was ordered by the B. d. A. initially not used for incoming submarines. For departing U-boats, the escort was only to be extended so far that the escort vehicles were again in the Blaavands Huk area when it got light.

Barrier 55 with deep mines was probably thrown on the basis of the observation that the German U-boats habitually approached the northern coast under water. It was only discovered during a night search by the 9th Torpedo Boat Half Flotilla (Kapitänleutnant Müller, Adolf) found in the night of October 19th to 20th by running out the equipment of both gangs. However, the suspicious spot was not avoided sufficiently during a torpedo boat advance on October 21, so that "S 33" (Lieutenant Captain Christian Schmidt) from the 18th Torpedo Boat Half Flotilla (Kapitänleutnant Köhler) with the stern ran into a mine of this barrier. 31

Blocking of the northern coastal path Page 17

The boat could be towed by boats from the 18th Torpedo Boat Half-Flotilla. The Fleet Commander felt compelled to ask the Commander of the IX. Torpedo Boat Flotilla (Korvettenkapitän Goehle) and the boats involved to express his special appreciation for the successful salvage of the badly damaged boat under the most difficult weather conditions. The White Route has now been shelved due to the mine insecurity identified at Lyngvig.

In addition to these barriers, which were calculated against German naval forces marching directly under the coast, barrier 48 (235 mines) was laid on June 23 about 35 nm west of the Hornsriff lightship. This barricade, which was laid just ahead of the Blue Route leading free from the coast, clearly showed that the enemy had learned from the experiences and observations of outgoing U-boats. The barrier, which was laid out in an irregular shape, had deep standing mines in its western part (the mines were at 25 to 28 m at a water depth of 40 to 43 m) and shallow mines in its eastern part. The outgoing submarines were to be forced to dive through the shallow mines and then fall victim to the deep mines. The lock was only found on August 8, 1918 in its north wing, the shallow northern part was cleared on August 9 and 14, 1918.

During preparatory work for the Blue Route to the north, out of sight of the coast, the search boat "Skagerrak" (Obersteuermannsmaat Kiehn) of the 5th Auxiliary Minesweeping Half-Flotilla encountered a mine at barrier 39 on August 19 and sank. A stoker was seriously wounded. The minesweepers sensing the Blue Route had first attempted to drive the Blue Route north-west and in doing so had encountered barriers 42 and 20. The FT traffic developing on these occasions had probably been observed by the English and had cause to draw conclusions the German intentions given, without it being possible to gain clarity about the actual situation of Blue Route on the English side. The sequence of the picture obtained may be that of December 30, 1917 from "Abdiel", "Inconstant", "Phaeton", "Galatea" and "Royalist" with 339 mines thrown barrier 74, which would have been suitable to cover the presumed breach between barriers 42 and 20 era. Barrier 74 was only touched in September 1918 and played no role in the mine warfare because the Blue Route had been turned west south of barriers 39 and 42. It led westwards freely out of the restricted area via the northern wing of lock 30, which was searched in May 1917, and was available for advances by surface forces and for U-boats from mid-November 1917.

The mine attack against the southern outflow route under the coast advanced considerably further west from the second half of May 1917. After the large barrier 41 had been found on May 26, the three southernmost parts of the barrier were identified on June 2, 1917 by the 5th Minesweeping Half-Flotilla (Kapitänleutnant Glimpf, Friedrich) and cleared a few mines. When the work on this barrier was continued by the 1st and 7th Minesweeping Half-Flotilla (Kapitänleutnant Gebhardt, Heinrich, and Kapitänleutnant Nerger, Johann), the multi-row form of the barrier was confirmed. During the work "M 47" (Lieutenant z. S. d. R. Biermanns) of the 1st Minesweeping Half-Flotilla ran into a mine on June 8, 1917 and sank after 35 minutes: 5 dead, 1 seriously injured.³²

Page 18 2. The mine warfare in the German Bight until the end of 1917

The steamer "Turin" ran onto the same Barrier on June 14, 1917. No further work was carried out on the barrier in the future.

During clearing work in front of the Ems by the 6th Minesweeping Half-Flotilla (Kapitänleutnant d'Ottilie) on June 4, 1917, "M 23" (Minen-Obersteuermann Schweitzer) ran into a mine at barrier 35. The mine detonated to the starboard aft and flooded the rear rooms. "M 8" (Oberleutnant z. S. Heye) and "M 10" (Kapitänleutnant d. R. Enderlein) sheared alongside, undercut the boat and began to bilge [lenzen]. However, the boat could not be held because the long, westerly, transverse swell made the salvage work very difficult despite the calm sea) the bilge pumps of both boats could not cope with the incoming water. When "M 23" suddenly lay-over to starboard and the boiler room also made water, the hawsers had to be used be capped. "M 23" sank to the bottom stern first. The loss was 2 dead and 1 seriously injured.

On June 17th, the German steamer "Venus" north of Ameland 45m north of the trade route ran into a mine at barrier 38 and sank. Outpost boats rescued the crew. The steamer was en route from the Ems to Rotterdam with Dutch pilots as with the steamer "Turin", the captain relied on the pilot's alleged knowledge of mines, who generally pushed away from the coast and reluctantly kept to the 10 m line assigned to them. After lock 38 had now caused "S 17" (1) from the Ems picket flotilla, the picket boat "Max Schinkel" (1) and the steamer "Venus" to sink, on June 18, the 6th Minesweeping Half-Flotilla was tasked with detecting and clearing. When this half-flotilla had already cleared four mines on June 18, the command boat "M 9" (Leutnant z. S. d. R. Borries, Alexander) ran into a mine. The boat sagged very quickly over the stem with the fore section badly damaged and a heavy list. The loss was 2 dead and 1 seriously injured. In the next few days, further mines were cleared from this barrier, which had hit 20%.

The mine contamination of the sea area immediately in front of the Ems by English submarines forced them to avoid that sea area, which has meanwhile been largely cleared. Barrage 40, which was thrown on May 18 and had already advanced almost to Terschelling and which consisted of 20 time mines, was not found, nor was barrage 43, which was laid on May 25 and consisted of 900 mines. Both mine barrages had no effect on the mine warfare.

The next barricade thrown by submarine was already attacking the shipping route between Texel and Terschelling and thus moved the mine warfare about 30 to 50 nm further west compared to the mass of previous barricades, a distance that was necessary for the advance and return march of the minesweeping units and with regard to their endangerment in the working area was of great importance.

1)	North	Sea	VI.	p.	$274.^{33}$	
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Page 19 Mines in front of the Ems

Between June 27th and July 27th, 1917, the English U-boats "E 34", "E 41", "E 46" and "E 51" laid barrier 49 (on June 27th), 50 (on July 7th), 51 (July 12th), 52 (July 16th) and 54 (July 27th).

Barrier 49 was located directly on the shipping lanes and was discovered immediately after it was thrown. Four steamers of the 3rd auxiliary minesweeping semiflotilla had the returning "U 43" (Captain Lieutenant Bender) on June 27, 7 a.m., northwest of Terschelling) one squad drove in front of the submarine with equipment, the other protected against enemy submarines. After 1½ hours the device slipped out after an anchored English mine was sighted 400 m to starboard. While the search squad picked up the device and steamed back to the U-boat, the securing steamer "Sonnin" (Lieutenant z. S. d. R. Becker) spotted the mine, hit a mine and sank. The U-boat was now sailing through the contaminated area in the wake of two steamers, while the third steamer rescued the crew of the "Sonnin" and followed. To await them, the other steamers anchored, while "U 43" was moored behind the stern of one of them. In this situation, "U 43" sighted an enemy submarine. The vehicles accelerated, deployed the device and marched to the Ems. It was probably the enemy submarine "E 41", which had just finished throwing the Barrier 49. It was sighted observing the success of its activity for itself.

At noon on June 28, the 7th Minesweeping Half-Flotilla began searching in the mine-infested area. Here "M 63" (Oberleutnant z. S. d. R. Rogge) ran into this mine when starting to remove a mine stuck in the device of "M 63" after capping the device. The boat was hit on starboard at the forward boiler room under the bridge. "M 63", which was the command boat, was towed out of the barrier via the stern post by "M 34" (mine helmsman, d. R. Hartig) and "M 33" (Leutnant z. S. d. R. Dreier). M 63" had sunk deep in the bow and there was heavy seas, the boat was not able to undertake the task. After two hours "M 63" had to be given up and sank. The day before (June 27) the German steamer "Westfalia" had probably sunk at Barrier 49. At Barrier 49 in June the I. and III. minesweeper continued to work and the barrier was removed.

The barriers 50, 51, 52 and 54 were quickly identified and removed in July without any losses. If the coastal path had been cleared again by energetic minesweeping and clearing activities, it was to be expected that the searched area would soon be contaminated again. The quick removal was particularly valuable, since the deepstanding mines were quite dangerous for the submarines, which often submerged here. The chief of the III. Minesweeper Flotilla (Kapitänleutnant Wolfram) assessed the situation on the coastal path in July as follows:

"It seems very questionable whether keeping this path clear is feasible. All work is carried out in view of Terschelling and Vlieland, an expert can almost see the clearing of each individual mine with a good glass. A Dutch torpedo boat and a guard ship were lying in the Boomkenstief, which ran out when the half-flotilla approached the sovereign border in order to prevent work within the sovereign border.³⁴

Page 20 2. The mine warfare in the German Bight until the end of 1917

In my opinion, these considerations refer primarily to the rapid development of the Yellow Path and its expansion. We won't have to reckon with ever new underground mine barriers there. The work can only occasionally be observed by submarines or planes. Land bearings are not available, safe navigation for submarine mine-throwing is very difficult. It is of course easier to approach the Dutch coast with one's own U-boats, but the barriers are being pushed farther and farther out, and when the English get the news that the U-boats are submerging the outer barriers, there is a danger that they will do so on the coast with deep-lying mines, while they are not able to do this sufficiently outside and, because of the great depths, not with the same degree of certainty."

The need for the coastal route was particularly evident for the merchant ships sailing between Rotterdam and the Ems. The mine accidents that occurred on several steamers must not lead to a reduction in this traffic. It was only necessary to ensure that the captains followed the instructions given to sail along the coast on the 10 m line. The captains gave in to the advice of the pilots to stay away from the coast, all the more willingly because they feared getting stuck and being responsible to the Maritime Authority more than the danger of mines. The coastal path had been closed since June 28th. Due to unfavorable weather conditions, the clearing work was delayed, so that numerous ships gathered in Holland and Germany (in Holland about 35, in Germany 30). When the route was cleared, ships from Holland were to be transferred in three groups of around 12 steamers. On July 14th the way was cleared. The first group of 9 steamers made it to Germany unmolested, while the second group was attacked by English destroyers off Egmond in the evening of 15 July.

Commodore Tyrwhitt, who had received orders from the Admiralty to suppress the increasing traffic between Rotterdam and Ems, had made several unsuccessful attempts in June to seize merchant ships in cooperation with submarines and destroyers. According to his observations, the main night traffic from Rotterdam was at the very times when his light forces were directing Dutch trade to England. He now intended to take advantage of the next suitable opportunity to deliver a vigorous blow without regard to other tasks. When he received the news on the afternoon of June 15 that German ships would leave Rotterdam the following night, he positioned himself with his entire force - 8 light cruisers, 2 flotilla leaders and 15 destroyers - at dawn on July 16, 15 nm west from Texel. Soon after 7 o'clock, 6 merchant ships were sighted more or less together. Orders were given to the light cruiser "Undaunted" to chase and take the steamers. In a few minutes the steamers were broken up, two beached after being badly damaged by gunfire. The rest were taken to Harwich.

Such a mass approach of naval forces could only take place exceptionally. The system was therefore changed for the future insofar as the steamers were no longer released simultaneously in large numbers; from now on they departed individually and as inconspicuously as possible.³⁵

Page 21 English trade war off Texel

On July 19, the prize steamer Colchester, which had set sail from Zeebrugge on July 16, arrived safely in Germany. The two prize steamers Batavier II and Zeemeeuw, which left Flanders on July 27, were fired upon by English submarines near Texel. "Batavier II" sank close below Texel, "Zeemeeuw" was first taken over by an English prize crew and later brought to Helder by the Dutch Navy.

The chief of the fleet had indeed expected an occasional attack on the merchant shipping Rotterdam-Ems, but believed that larger naval forces, cruisers and flotillas, should not be employed outside of Terschelling; the mine situation seriously jeopardized the safe return of naval forces as long as the Yellow Trail was not completed. Recent events urged that Weg Gelb be cleared of mines as soon as possible, in order to have sufficient possibilities for marching to and fro in operations by High Seas Forces outside the mine belt.

At the end of June 1917, the Fleet Commander had considered laying a deep mine barrier west of the Ems as a defense against enemy submarines penetrating the German Bight. This barrier was thrown by the minelayer "Senta" (Kapitänleutnant R. Reimers) on July 17, after the barrier courses had been searched the day before by the 5th Minesweeping Half-Flotilla (Kapitänleutnant Glimpf, Friedrich). The barrier consisted of 250 U -Mines.

In the night of August 22nd to 23rd the English side west of Texel was thrown by "Princess Margaret", "Angora" and "Wahine" the large barrier 58 consisting of 1000 mines sighted and reported to the departing "UB 21" (Oberleutnant z. S. Walther, Franz) on an easterly course south of the Dogger Bank. Fleet Chief and B. d. A. believed in further closures in front of the Yellow Route in the middle of the mine belt and no longer considered a counter-operation possible. Since the blockade actually took place on the southern route near Teiel, a combat group advancing in the direction of the Yellow Route would have encountered nowhere. Barrier 58 thrown that night has not been detected, nor have Barriers 61 and 63 thrown by "E 45" and "E 46" on September 22nd and 26th. Barriers 61 and 63 were too far from the 10 m line for their purpose of closing the southern route. They do, however, suggest that the English were aware of the basic behavior of returning U-boats, which von Helder had first submerged and surfaced in the area of the shallow mines and steered along the coast. Although the barricades mentioned, which were dangerous for U-boats despite their weakness, remained unknown on the German side and had no known direct successes, the B. d. U. decided in mid-October to block the way under the coast after a submarine leaving the sea had not reported back after passing the restricted area border, despite being expressly instructed to do so.³⁶

Page 22 2. The mine warfare in the German Bight until the end of 1917

The B.d. U. considered continued use of the coastal path permissible only when this path was thoroughly checked and cleaned by torpedo boats with equipment and the convoy was pushed further west. After control trips had taken place over the next few days without incident, the coastal path was released again for surface traffic. The blocking of the coastal route meant that departing submarines were sent through the Little Belt for a few days, since the other North Sea routes were also very unsafe at the same time.

A day after the B. d. U. had decided to release the coastal path, it was contaminated again by a shallow barrier (66) thrown by "E 45" on October 18, 1917. It was on the 10 m line that U-boats were supposed to keep when traveling over water and was discovered by escort boats from the Ems picket flotilla at the beginning of November. No casualties were reported as a result of this barrier. After rough seas prevented the Uboats from sailing from November 23rd and several U-boats had accumulated on the Ems, the head of the 2nd Ems Outpost Half -Flotilla (Kapitänleutnant Marcard) decided to use them without equipment despite heavy seas to get out onto the coastal path. He left on November 29 with "S 19", three trawlers and four submarines. "UB 61" (Oberleutnant z. S. Schultz, Theodor) ran into a mine at lock 68 and was lost with its crew. During the rescue attempts an hour later, the outpost steamer "Dirk von Minden" (Lieutenant z. S. d. R. Nicol) ran into a mine and sank, losing 16 men. Further mines from this barrier were cleared by the I. Minesweeper Flotilla during December. The losses sustained at barrier 68 on November 29 prompted the route under the coast to be closed again. The clearing work in this area meant that the barriers thrown on the coastal path by "E 51" and "E 34" on November 23 and 30 were found and partly cleared. However, the coastal path was not released because the search work progressed slowly during the months of bad weather.

On May 24, 1917 (1) the Fleet Command had ordered that all means be used to work on the Yellow Route, expressing the fact that this route was also advisable for surface forces, especially as reports of intended attacks on Flanders were increasing. The frequent contamination of the routes in the north near Hornsriff and in the south under the Dutch coast brought the need to expand the Yellow Route more and more to the fore; it was doubtful whether it would be possible in the long run to hold the other roads. The efforts of the German minesweepers on the Yellow Trail had not gone unnoticed. The direct observation of the German mine clearance work by English U-boats and the radiotelegraphy used unhindered and without clear recognition of the disadvantageous consequences by the units working in the mine area up to mid-October 1917 gave the enemy all too good information.

1)	North	Sea	VI,	p.	$270.^{37}$	
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Page 23 Clearing work on path "Yellow"

The system of the barriers laid from May 1917 to the end of the year on the outskirts of the Yellow Path opposed the efforts to extend and expand this sally gate, the longer the greater the obstacles. In spite of the navigational difficulties of this path, which was free of coastal objects, enemy observations were accurate enough to place a number of U-boat barricades in the area of path yellow up to the area of point Q in the autumn of 1917.

However, in the summer of 1917 the Dutch government took certain measures to make it easier to approach the German Bight. The Terschelling Bank lightship was relocated to the west, i.e. out of the mine area and into the so-called neutral channel, the narrow strip between the German and English restricted areas. By mid-September there were four Dutch lightships in the neutral channel: Doggerbank North, Doggerbank South, Terschellings Bank and Haaks lightships, plus six light buoys. Naturally, this extended beacon offered considerable advantages to neutral shipping, as well as to the enemy heading for the German Bight or the mine belt, which also benefited German U-boats returning home and naval forces advancing out of the German Bight. To facilitate navigation, trawlers were provided by the German side as war light ships, which were occasionally anchored at certain navigational points on the cleared routes, especially when escorting U-boats. In addition, a navigation cable was laid on September 26, 1917 to improve the Yellow Path.

On June 30, 1917, the Admiralty informed the Fleet Command that, according to reports from Kristiania (Oslo), the English had announced the restricted area in the north up to the latitude of Hanstholm, in the west up to 4° E longitude and in the south up to 53° N. width would have expanded. The expansion had to complicate the clearing activities and the ongoing control: the longer approach delayed the clearing work, the increase in the contaminated sites increased the need for clearing vehicles, and because the clearing sites were farther away from the bases, the clearing units had to be better protected. This realization prompted the Fleet Command to propose that the mine clearance forces be strengthened at the expense of the Baltic Sea forces, since the new buildings promised not even to cover what was missing from the target stock, let alone the losses, in the foreseeable future. At the beginning of July, the II. Minesweeping Flotilla was then assigned to the command of the High Seas Force. In addition, reconnaissance by airships and airplanes was to be attempted to determine what the English were doing in the extended restricted area. For this purpose, aircraft reconnaissance should primarily cover the Terschelling/Texel and Nordmandstief/Boybjerg routes. Furthermore, reconnaissance flights between Borkum and Zeebrugge should be started as soon as possible.

The work had initially made good progress. At the end of June, Yellow Route was broken through, although not yet to a sufficient extent. At the end of June, the Fleet Command ordered that a mine-free basin should be created in the area of Point Q, which would provide a certain sea space for the approach of the minesweeping forces and for the stay of the security forces. ³⁸

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Page 24 2. The mine warfare in the German Bight until the end of 1917

It should also serve as a submersion area for incoming submarines.

At the end of July the B. d. U. cleared the Yellow Route for the submarine escort. The dive pool, a square 20 nm on a side, was also expanded and cleared of mines except for small pieces in mid-August. However, there could be no doubt that new mine attacks would soon follow on the Yellow Route and that the main forces of the minesweeping units would have to be devoted to the expansion and maintenance of this road. It was therefore necessary to check and explore the mine location as frequently and as far to the west as possible. For this purpose, so-called stab trips were carried out at night beyond the fixed mine belt by barrier breakers and torpedo boat half-flotillas. It corresponded to the nature and the equipment of these naval forces with minesweepers that they could only explore relatively narrow strips. As a result, at the end of 1917, the minesweeper flotillas, which are indispensable for the actual mine clearance work, began to be used for such search trips. Due to their much better equipment with minesweepers and their excellent special training, they controlled wider areas with greater certainty. These reconnaissance advances extended to the west as far as the neutral channel. Fast minesweepers were not fully available for this service; they could have rendered valuable services in the fight against the mine blockade.

The two barriers 44 and 46, which consisted of a total of 430 mines on May 30, 1917 and June 13, 1917, initially played no role in the expansion of the Yellow Trail because they were too far north. On August 15th, however, a barrier consisting of 1,000 mines was thrown across the outskirts of the Yellow Route by the minelayers "Princess Margaret", "Angora" and "Wahine". The laying of this irregular and deep barrier (56) was accidentally observed. The I. Special Group of the North Sea Outpost Flotilla (Lieutenant z. S. Woldag), consisting of the steamers "Fritz Reuter", "Kehdingen" and "Dithmarschen" advanced northeast on August 14 to round the Fanö -Calais cable at the crossing point cut with Yellow Route. After the task was completed on August 15, the special group anchored about 12 nm northwest of point Q during the night of August 15-16. The night was bright, there was a slight swell. At about 12:30 a.m., two or three torpedo boats passed the special group at anchor from the east. The commander of the I. Special Group thought the boats were U-boat escorts which, according to verbal information he had, were to use the Yellow Route when leaving that night, but as Lieutenant z. S. Woldag only discovered after his return that the ship had not sailed. An hour later, at about 3:30 a.m., a dimmed westbound ship came into sight to the south-east, which later turned towards the special group from the south-west and passed between the boats. It was one of the three English minelayers. The leader of the I. Special Group first sounded the alarm, had the torpedo tubes manned and tried in vain to cut the anchor lines. In the meantime he had doubts as to whether the ship could not perhaps be a German barrier breaker.³⁹

Page 25

English countermeasures

Unfortunately, the extraordinarily favorable opportunity to shoot down an enemy mine thrower was not taken; the special group had been informed of all movements actually made in the German Bight, and in this case there was no justifiable reason for uncertainty. Immediately after passing the minelayer, the sound of mine throwing was clearly heard, but by then it was too late to get to the enemy. Attempts to let the chain slip and break away with extreme power ahead and hard rudders failed, the steamer went out of sight too quickly.

The incident gave rise to technical improvements to the special group's anchoring facilities; he underlined the need for reliable information at all times for formations at sea and intended movements on the outlet routes. — On September 8, 1917, the I. Special Group of the North Sea Outpost Flotilla, led by Lieutenant z. S. Woldag also northward of the cable Fano — Calais about 50 nm north of Terschelling.

The next day—August 16, 1917—confirmed that the enemy was aware of the conditions on the outskirts of the Yellow Route. At midday the next day, while clearing the Yellow Way south of Point Q, the 5th Minesweeping Half-Flotilla had a surprise encounter with English surface forces. Due to the message about the barrier thrown in the last night, the B. d. A. instructed the minesweeper half- flotilla working on the Yellow Route the next morning to establish the new barrier. The 8th Minesweeping Half-Flotilla proceeded to the reported square while a group composed of boats from the 5th and 6th Minesweeping Half Flotillas stayed in their work area to complete one more easterly course search strip and then return. The unfavorable visibility conditions - the visibility was about 4 nm -, increasing wind and sea state as well as the aerial reconnaissance that was broken off at about 10.30 a.m. made working in the outskirts too long seem inexpedient. The cruisers "Frankfurt" (Fregattenkapitän Rebensburg) and "Karlsruhe" (Fregattenkapitän Tietgens) with three boats of the 12th Torpedo Boat Half-Flotilla (Fregattenkapitän Lahs) were stationed as security forces about 7 nm northeast of the work area up and down on the Yellow Route.

The 5th Minesweeping Half-Flotilla (Kapitänleutnant Glimpf), reinforced by boats from the 6th minesweeping Half-Flotilla, lay in a search cross-line 5 nm east of barrier 56, namely "M 65" (Lieutenant z. S. d. R. Blau) as command boat, "M 55" (Oberleutnant z. S. d. R. M. A. Klinke), "M 53" (Leutnant z. S. d. R. Schober), "M 37" (Oberleutnant z. S. Stier), "M 4" (Vizesteuermann d. R. Krommes), "M 28" (Oberleutnant z. S. Wenzing), "M 29" (Oberleutnant z. S. d. S. II Nicolaisen); one of the boats as a buoy boat. "A 36" (Leutnant z. S. d. R. Nitzschke), which took up fairway buoys as ordered 5 nm further south and out of sight of the minesweeper half-flotilla, sighted eight English destroyers sailing in two groups to the SSW at 12:55 o'clock, behind them three cruisers. The enemy was heading for "A 36", which was zigzagging north-east. A lively firefight developed at a distance of about 5300 m. "A 36" tried to reduce the enemy's fire effect by developing heavy smoke. After a short time, the "M 28" came into view as the battle developed to the north-east, which was busy clearing a capacitor accident and was almost ready for action again.

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Just at this moment the search line of the 5th Half-Flotilla came into view and apparently caused the main part of the enemy naval forces of "A 36" and "M 28" to withdraw. Both boats had remained undamaged despite heavy shelling; they managed to pull themselves out of the enemy's range of action.

When the 5th Minesweeper Half-Flotilla spotted the enemy, the device was towed and on an easterly course battle formation was taken in line with the keel. A passing battle developed on an easterly, later ENE course, which lasted from about 13:10 p.m. to 13:25 p.m. The enemy soon let go of the boats. The artillery battle had been lively; according to the half-flotilla commander's impression, the hits were always close together, and they seemed to be boats with modern directional systems and firing devices. At 13:18 p.m., "M 65" was hit in the main steam pipe, the engines failed, and the boat remained stranded and unable to maneuver. "M 55" and "M 37" developed fog, behind which all boats except "M 65" were able to retreat. While "M 65" was still unmaneuverable, a destroyer approached it to within 1800 m. "M 65" received a double hit in the port forward bunker in the renewed fighting, but responded with heavy gunfire, although at that time half the crew was dead or wounded, the guns were weak and the transport of ammunition was halted. The destroyer soon came out of sight and joined the retreating remaining forces.

The commander of "M 55", who had led the half-flotilla behind the smoke screen, decided to turn around again to pick up "M 65". But when he emerged from the fog and saw the masts and outlines of ships, which he took to be cruisers and destroyers, he correctly led the half-flotilla back into cover, since the balance of power compared to modern English vessels offered a hopeless situation and the preservation of the M-boats, which were valuable and almost indispensable for the minesweeping service, was more important than a useless sacrifice.

The badly damaged "M 65" was in a difficult position. The attempt to tow the boat with the motor dinghy into the smoke screen failed because the boat had a leak and was full of water. With the help of the damage sail set as an emergency sail, the "M 65" picked up speed. At around 15:00 p.m. "M 37" and "M 55" came to provide assistance; "M 37" took "M 65" in tow.

During the battle, "M 65" received three hits, "M 4" one hit and "M 37" one hit; Only "M 65" suffered personnel losses: 10 dead, 8 seriously injured and 5 slightly injured.

The security forces had not succeeded in fulfilling their task. "Frankfurt" and "Karlsruhe" had been on the Yellow Route with three torpedo boats of the 12th Half-Flotilla, heading east, when at 12:55 hours starboard aft in a south-westerly direction, gunfire was faintly audible for a few minutes. The leader of the security forces, Fregattenkapitän Rebensburg, saw the situation as unclear, especially since he received a radio message from "L 45" at the same time as the cannon thunder, which later turned out to be incorrectly received, that the airship was fighting enemy forces. ⁴¹

Page 27 Minesweepers fighting English destroyers

He had not received any reports from the minesweeping half-flotillas and believed that he should not aim for the thunder of the cannon because of poor visibility and the danger of mines. When a submarine report, which later turned out to be a false alarm, also arrived and prompted the security force to withdraw from the endangered area in an easterly direction, the prospect of fulfilling the actual task of protecting the minesweepers had passed. The minesweepers were only picked up when they were safely on their way home.

The 18th Torpedo Boat Half-Flotilla (Kapitänleutnant Köhler), which was also in the vicinity of the work area, was at high speed in response to the FT report from the "Frankfurt" which the cruiser had made to the fleet commander about the gunfire heard at 12:55 p.m. On the march there, the 18th Torpedo Boat Half -Flotilla encountered the security formation, which kept the 18th Torpedo Boat Half -Flotilla with them.

The events of that day were instructive in many ways. At first it was inexplicable why the English naval forces had not taken advantage of the good opportunity to completely destroy one of the minesweeping half-flotillas. Kapitänleutnant Glimpf asked the following questions in his diary:

"The question arises, why did the English turn away so early without achieving a certain success? Did they overestimate the fighting power of the boats? Was the use of destroyers too valuable for the possible gain? Were they afraid of the area of their own mine barrier, in which there were numerous buoys that they might suspect?"

These legitimate questions cannot be answered, since the English naval war work does not mention the action of that day. If the success of the day was unsatisfactory for the enemy, then the courageous behavior of the participating boats of the 5th and 6th Minesweeping Half-Flotilla corresponded to the best expectations, the crews showed themselves to be fully up to the situation.

The cooperation between the minesweeping unit and the security forces was less satisfactory: the commander of the security unit had general knowledge of the location of the minesweeping work and knew which minesweeping flotillas were in the work area. However, he had no exact knowledge of the division and the individual editions of the half flotillas. He greatly overestimated the possibilities of impeccable reporting and signaling discipline on the small boats he was entrusted with protecting. If the security formation did not take the thunder of cannons as an opportunity, to rush towards him despite the danger of mines and lack of sight, it emerged from later F.T. reports that the 5th Minesweeper Half-Flotilla was engaged in combat with enemy destroyers. Unfavorable circumstances had contributed to the fact that the leader of the Security Forces had an incorrect picture of the situation. The question arose whether in the future capital ships would not have to be used for security as a matter of principle. However, this was initially refrained from since the heavy ships were considered too unwieldy to counter submarine attacks when patrolling in a limited sea area. 42

Page 28 2. The mine warfare in the German Bight until the end of 1917

The battle on August 16, 1917 resulted in the order that work west of 5° 10′ E should only be carried out with airship reconnaissance with at least 10 nm visibility and protection by naval forces. Furthermore, the reinforcement of the artillery armament of the older M-boats was initiated.

The appearance of English flying boats in the sea area on Weg Gelb, which was observed over the next few days, again confirmed that the enemy had recognized German intentions and would undoubtedly continue to monitor and disrupt the work. At first an attempt was made to turn off the Yellow Route to the south, because it could be assumed that the British naval forces, which had advanced on August 16, had broken in further south. Mines were always encountered during night trips by the 7th and 8th Minesweeping Half-Flotilla on August 21st and 26th. These belonged to the north and south wings of barrier 56 and indicated that the entire width of the Yellow Route was closed. This barrier was actually particularly dangerous because it had deep mines in the outer part and the U-boats were instructed, after being released by the convoy, to leave the sea submerged up to the restricted area border and, during periods of bad weather, already submerged from the Borkum Riff lightship if the convoy entered the sea could no longer hold. It can be assumed with certainty that "U 50", which had sailed unaccompanied on August 30th in rough seas on Weg Gelb and disappeared, landed on the deep mines of barrier 56. The corpse of the commander of "U 50" drifted on Amrum on September 23 and, according to a medical report, had been in the water for about four weeks. The fact that there were deep mines at lock 56 was discovered during search work in early September and should have been a serious warning to outgoing U-boats.

Other numerous U-boats that have set sail along Weg Gelb since barrier 56 was thrown on August 15 have repeatedly encountered definite signs of mines in the area of barrier 56. "U 54" (Kapitänleutnant Heeseler) set sail on September 5, 1917 together with "U 88" (Kapitänleutnant Schwieger) on the Yellow Route. "U 54" passed the mine area diving and, after several streaks of mine anchor ropes on the hull, had a fairly heavy detonation behind and above the boat. Further heavy detonations were heard at a greater distance and then the streaking of mine anchor ropes was again noticed. The commander drew the conclusion from the detonations that "U 88", which was not heard of again, had been destroyed by a mine.

"UB 34" (Oberleutnant z. S. Ruckteschell) sailed on September 24th at night via Weg Gelb. This boat, too, which was a little further south, incomprehensibly passed the partly deep mines of the southern part of barrier 56, which were found at the beginning of September. The boat occasionally heard scrapes from mine anchor ropes at a depth of 30 m. On September 25, 5:45 a.m., the boat was further west and, according to the war diary, made the following observations: "Strong rumbling, especially in the stern, boat trembles heavily) apparently rapid succession of detonations. Objects tumble aft) However, boat maintains position. It will stop and obey. Nothing to hear. Going deeper with a little speed. Something is stuck on the hull of the boat, you can hear soft jolts. 43

Page 29 Submarine escort through the mine area

Then a rather loud detonation over the boat. Boat is on the bottom; waited a bit, all quiet. Steered further to 30 m, from time to time scratches from mine and anchor ropes can be heard." At around 12 o'clock "UC 34" continued its march to the west without diving.

That night "Princess Margaret" had laid barrier 62 west of barrier 56, consisting of 432 deep new lead cap mines. It is believed that the laying and possibly accidental detonation of mines from this barrier was heard by "UC 34".

After "UC 34" returned via Yellow Path on September 29 and reported its observations, it became absolutely clear that the extended Yellow Route was closed. Whether other submarines were destroyed by the mines on Yellow Route during this time is doubtful. On October 9, the B.d.U. decided to temporarily close the Yellow Route and instructed outgoing submarines to use the Little Belt. Only individual submarines dispatched to the English East Coast and the English Channel were further ordered to use the Yellow Route in surface voyages with an escort, accepting the insecurity. The underwater march through the area occupied by deep mines was no longer justifiable. On October 11, the officer in charge reported the following to the fleet commander: "If the conduct of the submarine war is not to be seriously jeopardized, the measures for the escort service must undergo a fundamental change and, in principle, be reduced to sailing out and coming in over water with an escort up to the vicinity of the restricted area border. In view of the increasingly difficult conditions in the operational area itself, the demand must be made more urgently than ever to take all precautions to prevent boat losses when leaving and entering the German Bight."

The B.d.U. applied for the Yellow Route as soon as possible for a check run to the restricted area border and then, in the dark, under the protection of a torpedo boat half-flotilla, for a check run by picket torpedo boats with equipment. He felt it was necessary for aerial reconnaissance to be focused on the area west of Yellow Route's plunge pool. Even after the requested patrol has been carried out, the Belt and Sound should be used during bad weather periods when escort with a search device would not be possible.

The B.d.U. considered it necessary for the future to change routes more frequently, including the Baltic Sea, and to carry out patrols with Barrier breakers and minesweepers as often as possible in a north-westerly direction to the English restricted area border. To cover up the routes, the U-boats were to march over water up to a certain distance from the German Bight at night, but submerged during the day.

The disruption to U-boat movements on the outer Yellow Route necessitated a stronger concentration of reconnaissance forces to the west. As a result, on October 9, the light cruisers and torpedo boats were transferred from the outpost service to the Westerems.⁴⁴

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The Helgoland air station gave up some of its aircraft to Norderney in favor of increased reconnaissance on Yellow Route, and the commander of the air force was instructed to primarily provide reconnaissance west of the Yellow Route. In order to secure the work on Blue Route, the ships of the line of the outpost service were to advance in a northerly direction in the future, once the minesweeping operations extended over the area of 113 Alpha (latitude of the Vyl lightship). In this case, the ships of the line were instructed to anchor in the Amrumbank passage at night.

Those on September 3rd, September 11th, October 7th, October 10th and finally on December 12th, 1917 the barriers 59, 60, 64, 65 and 73 thrown by the submarines "E 34", "E 46", "E 51" and "E 54" clearly showed that the work on the plunge pool and the multiple attempts to relocate it during work on the Yellow Route had been observed. Barrier 59 was found just two days after it was thrown by the 1st Torpedo Boat Half-Flotilla (Kapitänleutnant Spieß, Fritz) and was partially cleared over the next few days. Locks 60, 64 and 65 have not appeared. Lock 73 required several casualties. One day after the barricade was thrown, on December 13, 1917, a submarine convoy leaving the port had spotted the mines. While the escorting trawlers were picking up their equipment, "U 75" (Kapitänleutnant Schmolling) encountered a mine. The boat, which had not stayed exactly behind where the convoy was sweeping, sank. Only 2 officers and 7 men could be rescued. Barrier 73 was thrown after two convoys, one departing and one arriving, had passed the Yellow Route on December 12. The barrier lay particularly well on the route, and it is quite possible that "E 51" was watching the convoys and then threw the barrier.

On December 28, "M 11" (Minensteuermann d. R. Lassen) ran into another mine of Barrier 73 during clearance work — wind ENE, force 8 to 10 — after the area of this barrier had been passed through several times by battle cruisers. "M 11" was hit in the front, forecastle and bridge were destroyed. The people in the forecastle and on the bridge were killed, namely 1 deck officer, 5 non-commissioned officers and 14 men. Because of the heavy seas, other boats could not come alongside, the survivors had to jump into the water with life jackets and could be rescued, while "M 11" sank quickly.

Barrier 44, which had been in place since May 30, 1917 and consisted of 235 mines, was noticed on October 18 during a night trip by the 10th Torpedo Boat Half-Flotilla (Kapitänleutnant Anschütz i.V.) when one boat damaged a screw. A similar incident on October 29 prompted the 1st Torpedo Boat Half-Flotilla (Kapitänleutnant Spieß, Fritz) to search for them. On November 4th, while working on the suspected mine site, the guide boat "G 37" (Kapitänleutnant Boy-Ed) the stern hit a mine at lock 44 and the sinking boat had to be abandoned. "G 37" quickly sank by the stern. 1 officer and 3 men were missing, 5 seriously and 5 slightly injured.

Barrage 67, thrown on October 29 by "Abdiel", "Inconstant", "Phaeton" and "Royalist", consisted of 280 time mines and lay on the southern outskirts of Yellow Route, was found in January and March 1918. 45

Page 31 Fight against the English mine blockade 31

Some mines from this barrier were cleared, otherwise it played no special role.

Yellow Route was reopened on October 17, 1917 after being closed on October 9. The mine hits that occurred in the immediate future and up to the end of 1917 on the Yellow Route during inspection trips, dead-end trips and mine-sweeping work led to occasional closures, but on the whole the Yellow Route remained passable with certain changes until the end of 1917. It was relocated south of barrier 73 after the loss of "M 11" on December 28, 1917.

In addition to efforts to keep open the two under-coast routes to the north and west, as well as the main route out of sight of the Dutch coast (yellow route), an attempt was made to push through to the north out of sight of the Danish coast (blue route) and as a reserve at about to create another path through the middle of the German Bight (brown route) with the Cuxhaven/Helgoland extension.

Although the deployment of the II. Minesweeper Flotilla, the 8th Minesweeper Half-Flotilla and the 2nd Minesweeping Division to the Baltic Sea to carry out the operation against Oesel severely restricted the fight against the English mine blockade in the North Sea, the possibility of submarines was gone the German Bight in the North Sea interrupted only for very short periods; the relatively low mining activity of the English in the last three months of the year 1917 had a favorable effect. The attempt to destroy returning German U-boats by means of a guarded net mine barrier deployed south of the Dogger Bank for a few days on September 27 was unsuccessful. At the end of September, even before the English net barrier was laid, the suspicion had surfaced that the English had installed net barriers and net mine barriers. It referred to areas where fishing nets were likely to have been involved.

From October 1st to October 10th an operation with large forces was initiated by the English side in order to counter the U-boats returning through the North Sea with all available means. According to their observations, the Admiralty expected a larger number of U-boats to return through the North Sea during the first ten days of October. The routes and courses frequently used by returning German U-boats had been observed and the defense plan based on this. Strong English guard forces were deployed in a strip 40 to 80 nm wide from 54° N to 60° N. Large numbers of U-boats, flotilla leaders, torpedo boat destroyers and patrol vehicles were distributed within the strip, which were intended to push German U-boats entering this patrol zone under water and into a mine net specially designed for this operation. This net was laid out about 30 nm east-west of Dogger Bank at about the width of the Firth of Forth. The whole operation was affected by exceptionally unfavorable weather, so that the guard forces had to stand by for many days. After ten days, the weather-damaged net no longer posed a threat to U-boats.

Page 32 2. The mine warfare in the German Bight until the end of 1917

The laying of net barriers could only be done by larger surface vessels; it required time and undisturbed work. This blocking activity was initially not disturbed because the light nights that followed did not allow the armed forces to launch offensive advances against the blocking vehicles and their cover. Bad weather and the considerable exertion of all forces to create mine-free routes increased the difficulties.

The dispatch of strong naval forces to conquer the Baltic Islands on September 21, 1917 restricted the tasks for the High Seas Forces remaining in the North Sea to such an extent that the Fleet Commander was only able to ensure the continuation of the submarine warfare. It was sufficient to keep the two existing inlet and outlet paths clear. The Fleet Command determined that the main task of the minesweepers was to keep the "yellow Dive pool" and the paths leading inward from it clean. Advances by torpedo boat flotillas to clear up the neutral channel, which had been planned around September 20th, now had to be abandoned. Such operations only came into question again after the return of the High Seas Forces from the Baltic Sea.

At the end of October, after the end of the operations in the Baltic Sea, further measures against the British mining activity became possible. First, buoyed paths were created within the sea areas defined by the Terschelling/Hornsriff line, but their course remained difficult for enemy mining vessels to identify, making it unlikely that enemy surface watercraft would penetrate into the German Bight within the line mentioned. The last part of the German Bight up to the English restricted area border was to be controlled in the dark by the above-mentioned stab trips (1) with barrier breakers and torpedo boat flotillas behind minesweeping formations in order to have a number of routes available for a limited number of days. Some of the paths should only be reserved for the submarines, so as not to give away the paths. In this way, the fleet command hoped to draw the enemy's attention away from the routes intended for submarines.

The Chief of the Admiralty was of the opinion that an occasional capture of English minelayers must be possible through more offensive activity by light fleet forces. This assumption was only justified if the netlayers and guards had stayed in the border area of the German Bight for a long time. From August to December 1917, however, English mine cruisers and mine ships were only infrequently and for a few hours in the German Bight: four times in August, once each in September, October and December and not once in November. Even if the mine carriers were frequently driven down the neutral channel, they would only have been intercepted by chance before they were thrown. The Fleet Commander was of the correct opinion that, in view of the mine situation, advances by surface forces were only justifiable if they served operations that offered more than chance chances of success, especially since any appearance of surface forces on the outskirts would have made it easier to identify the usable routes and thus a unnecessarily endangering the U-boats.

1) See page 24. ⁴⁷	
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Page 33 Limitation of the tasks of the minesweeping forces.

The attack by superior enemy forces that took place during a stab voyage on November 17, 1917, and the resulting skirmishes with the stab voyage group are dealt with elsewhere (1). One consequence of the events of that day was the decision of the Fleet Command to have its own barriers on Heligoland cleared, since enemy forces could only penetrate into the inner German Bight in close connection with German forces and it was to be assumed that that they would avoid the firing range of the guns on Helgoland, where the mine barriers were located when the weather was clear. For their own armed forces, the Helgoland barriers were more of an obstacle than protection in the event of hostilities west of Heligoland. On December 5, the Fleet Command summarized the next tasks of the minesweeping forces as clearing the Blue Route, creating a Central Route by clearing the Helgoland barriers and clearing the surrounding squares. The Heligoland barriers were cleared over the next few months.

The most important consequence of the mine blockade was the ever stricter organization of the escort service. At the end of the year no U-boat was allowed to enter or leave the port without a minesweeper, unless heavy seas or unsightly weather made this impossible. The activities of the Ems advance post flotilla and the 3rd and 4th Auxiliary Minesweeping Half-Flotilla assigned to it had become increasingly important. At the end of the year, consideration was given to combining the entire escort service in one hand, a measure that was implemented in 1918.

In the course of 1917 efforts were made to equip all naval forces working in mine service and in the mine area, including the auxiliary warships, with mine protection systems. The equipment could only be partially carried out in 1917.

The following summary gives a picture of the size of the small units active in minesweeping and mine escort services at the end of 1917:

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I. Minesweeping Flotilla:
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"T103".

1 large T-boat, 23 M-boats, 6 A-boats (2 A-III, 4 A-II).

1st Half-Flotilla "M 52", "M 5", "M6", "M 13", "M40", "M 46", "M48", "M57",

"A37", "A76".

2nd Half-Flotilla "M 19", "M 18", "M20", "M 21", "M 22", "M35", "M 42". "A34",

"A75".

7th Half-Flotilla "M 87", "M 33", "M 34", "M 43", "M 44", "M45", "M51", "M54",

"A 54", "A 55".
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3rd Half-Flotilla "T 136", "M 59", "M 67", "M 69", "M 75", "M 76", "M 77", "M 83",

4th Half-Flotilla "T 104", "M 70", "M 78", "M 84", "M 88", "T 59", "T 60", "T 61",

5th Half-Flotilla "M 65", "M 3", "M 4", "M 25", "M 37", "M 53", "A35", "A 57". 6th Half-Flotilla "M 66", "M 2", "M 7", "M 8", "M 10", "M 28". "M 29", "M 30",

8th Half-Flotilla "M 64", "M 1", "M 32", "M 39", "M 41", "M 58". "A53", "A56".

3rd Half-Flotilla "Rear Admiral Maass", 5 steamers, "T 33", "T 76", "T 81", "A70".

1st Half-Flotilla "T 121", "T 113", "T 135", "T 138", "T 147", "T 148", "S 18". 12

Page 34 2. The mine warfare in the German Bight until the end of 1917

2 big T-boats, 11 M-boats, 10 small. T-Boats, 1 A-III boat.

"T 63", "T 67", .T 69", "T 82".

1 gr. 1 boat, 20 M boats, 2 A-III. 3 A-II boats, 1 small. T boat.

3 M boats, 45 trawlers, 9 small T boats, 9 A-III boats, 6 A-II boats. 1st Half-Flotilla "M 36", 7 steamers, "T 70", "T 75", "T77", "A73". 2nd Half-Flotilla "Wumme", 8 steamers, "T 72", "A 52", "A 69", "A 74".

4th Half-Flotilla "Franz", 8 steamers, "T 30", "A 33", "A 63", "A 77".

6th Half-Flotilla "M 38", 7 steamers, "T 73", "A 41", "A 68", "A 72".

Steamer "Borkumriff", 6 F-boats. Steamer "Tischen", 6 F-Boats.

2nd Half-Flotilla "T 122", "T 131", "S 16", "S 19". "S 24". 12 trawlers. The trawlers also had to occupy the light ship positions with convoys.

5th Half-Flotilla "Wangeroog", 6 steamers, "A 22", "A 26", "A 38", "A 71".

"T 68", "T 85", "T86".

"A36", .T 74".

Ems outpost flotilla: For escort service found use of the

trawlers.

Network Blocking Formation of the North Sea:

Barrier Breaker: 4 groups of 3 steamers, 2 reserve steamers.

Auxiliary Minesweeping Flotilla of the North Sea:

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II. Minesweeping Flotilla:

III. Minesweeper Flotilla:

II. Mine Sweeping Division:

3 tugs, 3 lighters.⁴⁹

Steamer "Ammon", 9 F-Boats. VI. *Mine Sweeping Division*:

"A62".

"T149".

"M50".

Page 35 Structure of the minesweeper units

Auxiliary Mine Search Division Wilhelmshaven for Jade/Weser:
1 steamer, 10 small tugs.

Auxiliary minesweeper division Cuxhaven for Elbe:
1 steamer, 7 small tugs.

The mine warfare against the German Bight had remained unsuccessful by the end of 1917. The tireless efforts of the German minesweeping and clearing units were all the more successful as the English mine material was not up to par at first and could only be brought up to a better level slowly. It was also difficult to bring the deliveries to the necessary level through improvisations. The enemy had fully recognized the failure of mine warfare and was aware that, in addition to the convoy system, blocking the entry and exit routes of the U-boats heading for their area of operations was an essential means of combating the U-boat threat. Two options were available. The plan to close the German estuaries by large-scale blockade attacks was obvious, but met with considerable difficulties in preparation and execution. According to the English Admiralty, the provision of 40 old ships of the line and 43 old cruisers was necessary to carry out this plan. The opportunity to do so was undoubtedly there. However, given the great need for cruisers to protect the convoys, considerable misgivings arose against this plan, all the more so since blocking attacks in history had never led to the desired goal and in this case, too, there were legitimate doubts about their success. Consequently, in the autumn of 1917, the Allied Council first suggested a different and novel plan, namely to close off the northern entrance to the North Sea between the Shetland Islands and Bergen by an extensive mine barricade. From the outset, however, the technical implementation of this plan was considered to be so difficult that it could not be carried out solely with the resources of the English Navy and, above all, the English arms industry. Rough calculation suggested that about 100,000 mines would be necessary. At the request of the English Admiralty, the American Navy took over both a large part of the material provision and the preparations for the preparation of suitable ships with the associated personnel for the design of the large mine barrier called "Northern Barrage" to be carried out in the course of 1918.⁵⁰

3. Activity of the High Seas Fleet from June 1, 1917 to the end of 1917

Security service

In the summer of 1917, Admiral Scheer assessed the general situation in the North Sea, insofar as it was decisive for the behavior of the High Seas Fleet, such that the enemy would not penetrate the mine belt, estimated at 50 nm wide between Hornsriff and Terschelling, with stronger forces. Decisive fighting within the Hornsriff-Terschelling line was therefore hardly expected, but penetration by light forces and air raids were. Our own base of operations, which in the summer of 1916 was still limited by the Amrumbank-Ems line, was now extended to a good 100 nm from our own main base in the Jade.

Mine-free routes were created to break through the enemy mine belt, but their reliability varied. There was generally only one route available for heavy forces over the summer, with other options available at times for light forces (1).

The considerations for the behavior in the event of a surprise attack by the enemy were that the enemy penetrating the German Bight had to be countered with the Outpost forces in order to thwart his plan of attack and get in touch with him; for the night torpedo boats could then have a chance of success be scheduled. When defending against an attack with all the High Seas Forces, all forces would first have to be assembled. The resulting loss of time would be tantamount to not defending.

The Chief of the Outpost Forces was therefore instructed to set out immediately with the Outpost forces in the event of a surprise attack, to seek contact with the enemy and, if possible, to encircle him. All airships and airplanes had to take off for reconnaissance and attacks when the weather was suitable. In the event of a simultaneous attack from the north and west, the enemy should only be countered in one attack direction in order not to split up.⁵¹

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1)	See page	12.			

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Page 37 Operation instructions

In the case of a pure air attack, ships of the line and armored cruisers were to repel the attack at their respective berths, while the Light Cruisers and Torpedo Boat Flotillas from the Outpost service had to spread out to defend themselves, to fight the retreating planes and to pick up damaged planes. If possible, the Light Cruisers and Torpedo Boat Flotillas in the harbor should split up if possible. The Bombers and Airships were to take off to attack and maintain contact with any motherships, while the fighters (see footnote p. 33) were to defend the attacked Stations. Furthermore, it was envisaged to bring the Torpedo Boat Flotillas to attack the Mother ships and the naval forces covering them. These considerations had led to a precisely defined and regulated security service for all High Seas Forces, whose task it was to report the approach of enemy forces in good time so that the necessary countermeasures could be taken. The security service should also, if possible, prevent the intrusion of enemy submarines and fight invading submarines with all means. The control of the exit routes and the routes in the inner German Bight for mines as well as the escort of outgoing and incoming submarines and, for example, commercial steamers and prizes coming from the sea were integrated into the general security service. In this system, the airships, the seaplanes from the List, Heligoland and Borkum stations, the outpost flotillas, the minesweeping formations, the barrier breakers and the torpedo boat half-flotillas trained in minesweeping were pushed furthest forward. The management of the security service was the B. d. A. transferred as head of backup (L. d. S.).

For any activity of the weakly armed minesweepers in the more distant parts of the mine belt, aerial reconnaissance or protection by naval forces should be a prerequisite. Although most of the M-boats had been armed with modern artillery, some of which had a caliber of 10.5 cm, since the fall of 1916, they could — left to their own devices — find themselves in very difficult situations during raids on the outskirts. In practice, they often carried out their work without air security and without effective protection, when the tasks were urgent and the sea conditions were favorable, or when the airship security had to be broken off due to the weather conditions, it was not known early enough for the naval forces to set sail in time. The chief of the III. Minesweeping Flotilla, Kapitänleutnant Wolfram, had quite correctly foreseen the things that happened on August 16, 1917 (1) when he reported in July 1917 on the work in the western part of the southern coastal path:

"The workplace is only 120 nm from Yarmouth, so it can be reached quickly from England by wire from Holland. An English advance of cruisers and destroyers would certainly result in the loss of a larger number of minesweepers, a loss which would hit us much harder than the loss of English destroyers, which I hope would then occur in almost the same amount as the English.

1) See	page 25 f. ⁵²
1) See	page 25 f. ⁵²

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Page 38 3. The activity of the High Seas Fleet until the end of 1917

The II. or IV. Reconnaissance Group was ready to leave the Osterems when there was no airship security, when the airship security was taking place but was never effective in those days, this rear cover was also missing". The first setback then also resulted in an increase in security and the order to work west of 5° 10" E only in clear weather — at least 10 nm visibility range.

For the airships, the Fleet Commander had ordered that offensive activity should take precedence over reconnaissance and security work during the attack period, and that as a rule only two airships should be provided for early reconnaissance and security work on the days of the attack. At all other times, depending on the weather conditions, four airships had to reconnoiter and secure the working area of the minesweepers on a circular arc that stretched from Lyngvig to the eastern edge of the Dogger Bank to Texel; they had to be in this border area as soon as it got light and land before dark to perform.

The aircraft were primarily required to provide early and evening reconnaissance. If enemy naval forces were reported to be approaching, all airships and seaplanes had to start attacking and maintaining contact without further ado. When enemy submarines were sighted in the German Bight, the necessary aircraft were ordered to attack by the heads of the naval air stations. The outpost forces were subordinate to the senior naval commander at the outpost as chief of the outpost forces.

Outpost duty was normally provided by about 8 ships of the line, half the battlecruisers, a reconnaissance group of light cruisers, an F. d. T. cruiser and two torpedo boat flotillas, of which usually a half-flotilla in List and a half-flotilla on the Ems are at the disposal of L. d. S. stood. The outpost forces were based on the outer ark (Vosslapp or Schilligreede) and on the Elbe (Altenbruchreede or Lower Elbe). The outpost ships were always so clear that they could set out at full speed 45 minutes after receiving the order and had steam up in all the boilers after a total of $1\frac{1}{2}$ hours. The torpedo boat flotillas in List and on the Ems were ready to leave at medium speed, the readiness of the other torpedo boat half-flotilla was matched to the readiness of the ships of the line.

The Chief of the Outpost Forces was obliged to use the outpost forces to cover all security forces and all sub-operations, such as airship reconnaissance and attack missions, torpedo boat advances and submarine support operations, and if necessary to advance armed forces at his own discretion. In the event of a sudden enemy attack, the restriction was that, without express orders, they could not proceed further than the Hornsriff line, about 100 nm north-west of Helgoland-Terschelling. All operational U-boats were in unexpected attack from the B. d. U. immediately start independently, leave and communicate the direction of the U-boats to all armed forces.

Over the course of time, securing the German Bight had developed into a gear train that worked almost like clockwork.⁵³

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Reconnaissance service

Air Force activity

The possibilities for airship security and aircraft reconnaissance varied depending on the weather conditions. The following overview shows the number of days on which airships and aircraft were active in reconnaissance and security service from July 1, 1917 to December 31, 1917:

	VI	VII	VIII	IX	X	XI	XII
Airships	11	11	9	5	2	6	6
Airplanes	27	20	17	17	7	15	12

In numerous cases the airships and airplanes managed to spot mine barriers. Due to the uncertain navigation of the air warfare, these reports could not claim to be completely accurate, but in some cases they were used to identify new mine barriers. Air force mine reports were received particularly during the months of June and July and in one case in September 1917. The naval airships "L 40" (Kapitänleutnant Sommerfeld) - 1 and 5 June - and "L 45" (Kapitänleutnant Kölle) - 11 June - distinguished themselves here, one of "L 23" (Kapitänleutnant Bockholt) - 7 June - submitted mine report proved to be erroneous. Mine reports from airplanes arrived: on June 5th from airplane "828" from the Borkum seaplane station (Flugmaat Koschinsky, Leutnant d. R. Orthlieb), on June 8th from planes from the Borkum seaplane station, on June 16th by aircraft "930" (Flugmaat Koschinsky, Flugmaat Adami) on June 28th by an aircraft from the seaplane station Borkum, on September 10th by a plane from the seaplane station Norderney.

Dogfights also became more frequent in the outskirts of the German Bight. On June 5, "L 40" (Sommerfeld) came into combat contact with an enemy plane between Terschelling and Schiermonnikoog. All available planes rose from Borkum to provide support Fire, which then turned west.

On July 12, "L 47" (Kapitänleutnant von Freudenreich) encountered an English flying boat about 15 nm north of Terschelling at about noon at about 3000 m altitude. The airship climbed to 4,500 m and turned from this altitude to attack the about 1000 m After opening fire with the machine gun from the front gondola, the enemy quickly turned and disappeared to the west. It was not possible to bring combat aircraft (1) into action against the enemy plane.

1)	According to	today's	expression	"fighter	planes". ⁵⁴
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Page 40 3. The activity of the High Seas Fleet until the end of 1917

The Borkum Air Combat Squadron, which had been reconnaissance in the Terschelling area that morning, had just landed at the time of the battle.

"L 46" (Kapitänleutnant Hollender), which was reconnaissance on June 14 in the area of Swartebank, was attacked there by an enemy aircraft; the airship, gaining an altitude of 5700 m, managed to outmaneuver the aircraft. The enemy, emerging from a bank of clouds at about 2500 m, quickly approached at first, but at higher altitudes its speed dropped sharply.

On the same day, "L 43" (Kapitänleutnant Kraushaar) was shot down near Vlieland by an English flying boat from Felixtowe, which was patrolling against airships crashed in flames after a brief firefight. The tried and tested commander and his capable crew were killed.

"L 42" (Kapitänleutnant Dietrich, Martin), which was securing in the middle of the German Bight, went in search of Terschelling after there was no news from "L 43", but was unable to make any determinations. The news of the loss of "L 43", which was soon confirmed from England, resulted in the instruction that at every opportunity, especially when airships were underway, combat aircraft should be pushed forward in the direction of Terschelling to combat enemy planes. The English history of the air war rightly states (1) that under these circumstances the commanders of the German airships could no longer conduct reconnaissance at low altitudes. The frequent encounters with English airmen forced the airships, as soon as they were spotted, to gain altitude; they thereby lost the ability to spot English submarines and push them under water.

On June 17, when fighter planes from Borkum were stationed near Terschelling to pick up airships near Terschelling, plane "743" (Flugmaat Goldbeck-Löwe, Vizeflugmeister Liebig) came into combat contact with an enemy large flying boat at 7:50 a.m. It was played at gunpoint range An air battle broke out from 150 to 50 m, in which the enemy turned to the west. Aircraft "743", which had received three hits in the fuselage, had to give up the pursuit due to a machine gun failure. Aircraft "834" (Vizeflugmeister d. R. Fillinger, Lieutenant z. S. Haller) also opened fire on the large flying boat, but had to stop the pursuit after half an hour due to the lower speed than was hopeless. The small radius of action and the insufficient speed of the fighter planes for the time being still questioned the urgent protection of the airships. In order to push the combat aircraft further west from Borkum and to extend their stay in the actual area of operations, an attempt was made to have the aircraft refueled by armed forces active in the minesweeping service; Furthermore, deployment exercises took place on barrier breakers in order to bring the aircraft with the barrier breakers into the combat zone as aircraft mother ships.

l) History of the Great War. The War in the Air by H.A. Jones. IV. Oxford 1930. p.20.⁵⁵

Page 41 Dogfights over the North Sea

In addition, regular reconnaissance flights from Borkum to Zeebrugge and vice versa were arranged.

On July 12th, the II. Combat Squadron of the Borkum Seaplane Station was deployed for the first time under the leadership of the Barrier breaker "Rio Pardo" (Kapitänleutnant Simonsen) on a barrage group. "Rio Pardo" took aircraft "1177", "Lothar" (Lieutenant S. d. R. Oelkers) Aircraft "1287" and "645" on board. Lieutenant z. S. Osterndorff. The deployment of the aircraft proceeded without difficulty and was occasionally repeated. The II. Combat Squadron, which was lowered near Hell Werden on July 13, was able to take off north of Terschelling.

The necessary close cooperation between airships and aircraft occasionally raised the question of a common frontline commander for all air forces, but without realizing this forward-looking suggestion. It became urgently necessary to promote naval aviation in the North Sea in terms of personnel and material; there was an obvious lack of combat aircraft and the necessary crews.

Other notable events in the naval air wars up to the end of 1917:

- July 25: Combat squad III of the Borkum Seaplane Station ("1173", Flugmaat Stark, Lieutenant d. R. d. M. A. Liebig. and "1288". Flugmaat Fehre, Flugmaat Götze) stop the Dutch sailor "Rolsina" west of Vlieland around noon. The sailor is released after examining the papers, which are in order.
- July 26th: Around 12 o'clock "L 46" (Kapitänleutnant Hollender) and "L 44" (Kapitänleutnant Stabbert) are attacked by an enemy flying boat north of Terschelling. "L 46" is at an altitude of 3000 m when an enemy flying boat is sighted at the same altitude about 4000 m down towards the airship. When trying to gain height, the airship initially does not go above 3500 m due to technical failure aft at the same height. Flies 1000 m behind the airship continue to shoot smoke or incendiary ammunition: after eliminating the disturbance, he is climbed over and taken under machine gun fire. Attack is maneuvered from 4500 m and planes are shot at with 2 machine guns. In 5500 m the aircraft has exceeded 1500 m. The aircraft turns north-west and attacks "L 44". The battle with "L 46" lasted 23 minutes. When "L 44" sighted the plane at about the same altitude, about 3500 m, they went ahead of the wind and drove with extreme power, since the plane still comes up strongly at about 4000 m. When the plane has approached at about 2000 m, it suddenly comes out of sight after "L 44" had reached 5600 m. Shortly after receiving the report from "L 46". that the airship is in combat with an enemy aircraft, Battle squadrons rise in Borkum. who can no longer see the plane.
- 5 August: Aircraft "931" (Flugzeugobermatrose Benter, Flugzeugobermatrose Voß) from the Norderney seaplane base is lost during a reconnaissance flight. Aircraft "923" (Flugzeugobermatrose Tellgmann, Flugmaat Büttgenbach) crashed on Borkum Riff. Crew recovered by Ems outpost flotilla. Aircraft "1101" Seaman Reiter and Flugmaat Würz) from the Norderney seaplane station, which was last seen west of Vlieland, is overdue. The crew of "931" and "1101", as will be known later, are interned in Holland. ⁵⁶

Page 42 3. The activity of the High Seas Fleet until the end of 1917

- 6 August: Aircraft "1260" (Flugzeugmaat Harsch, Flugmaat Adami) the Borkum seaplane station turned over and sunk west of Terschelling on departure after an emergency landing at sea, the crew was taken over by aircraft "1177" (Flugmaat Pütz, Lieutenant z. S. Osterdorff) and later taken over by the 11th torpedo boat half-flotilla.
- 20 August: Aircraft "1100" from the Heligoland seaplane station (Flugmaat Hinz, Lieutenant z. S. Kupferberg) examined Dutch sailor "Irene MA 85" in 072 *beta*.
- 5 September: "L 44" (Captain Lieutenant Stabbert) engaged in a skirmish with two enemy planes 45 nm north of Terschelling and at the same time fire with apparently larger caliber machine guns. The fire is returned by "L 44". "Graudenz" and "Bremse" get airship and plane in sight. Bremse fired at the planes, Graudenz had no anti-aircraft guns. The combat squadron that had risen from Borkum can no longer find the planes.
- 10 September: "L 53" (Kapitänleutnant Prölß) attacks 145 nm east of Tynemouth about 3000 t large unknown steamer from a height of 4000 m with explosive bombs, crew is disembarked, hits have not been scored.
- 11 September: At 8:25 a.m., aircraft "873" from the List sea-flying station sighted 13 English destroyers on an easterly course about 90 nm north-west of Heligoland.
- 25 September: Airplane "1136" (Flugzeugobermatrose Nagorsnik, Lieutenant d. R. Liebig) from the Borkum seaplane base has an air battle with an English biplane abeam Terschelling. Enemy is pulled west. Aircraft "1133" (Flight Mate Harsch, Fähnrich z. S. Heintz) is also engaged in combat with enemy biplanes.
- October 22nd: Aircraft "873" (Flugzeugobermatrose Ashoff, Fähnrich z. S. von Dalwigk- Lichtenfels) from the Lift sea air station made an emergency landing 10 nm from Bovbjerg, Fähnrich z. S. von Dalwigk- Lichtenfels drowned.
- December 11: Aircraft "1149" from the Norderney seaplane station has to make an emergency landing in 108 *gamma*. Not found by aircraft that had risen to search.
- 18 December: Aircraft "1421" and aircraft "1423" from the Norderney seaplane base are forced to make an emergency landing. Crews rescued by "G 38", "G 39" and "G 86" of the 1st Torpedo Boat Half-Flotilla under particularly difficult sea conditions.

Operations of the High Seas Fleet

Initially, there were no offensive activities for the capital ship formations. During the summer months, all units were alternately sent to the Baltic Sea to carry out artillery and torpedo firing exercises; occasionally they were also combined for joint exercises in fleet units in the Heligoland Bight. It was not considered necessary for the minesweepers working in the north, north-west and west to be directly secured by ships-of-the-line or battlecruisers. The small cruisers and torpedo boat flotillas of the outpost forces, which advanced to the Ems and advanced near the working areas of the minesweeping units in the event of air traffic loss, seemed to provide sufficient protection. ⁵⁷

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Page 43 Securing the North Sea during the Ösel Operation

Advances with torpedo boat flotillas, which searched the English restricted area and were supposed to damage anti-submarine forces stationed there, had to be given up again and again because reports of new contamination of the exit and entry routes with mines prohibited valuable combat units from being sent to sea for activities that were not necessarily important send. For operations of the High Seas Forces, Admiral Scheer considered it necessary to widen the barrier gap to 10 nm and to check the entire breach strip carefully. For this, at least 10 working days, mostly with airship security - that is, several weeks - would have been a prerequisite. The detachment of High-Seas Forces to the Baltic Sea for operations against the Baltic Islands put an end to plans of this kind for the time being.

A special unit was formed for this operation on September 15, the leadership of which was transferred to the Chief of Squadron I, Vizeadmiral Ehrhard Schmidt. The special unit consisted of the naval forces of the Commander-in-Chief of the Baltic Sea Forces and parts of the High Seas Forces. The High Seas Fleet provided:

"Moltke" as flagship,
III. and IV Squadron,
II. Reconnaissance Group without "Pillau",
I. F.d.T. on "Emden",
II. and VI. Torpedo Boat Flotilla,
13th Torpedo Boat Half-Flotilla,
II. Minesweeping Flotilla,
8th Minesweeping Half-Flotilla,
II. Mine Sweeping Division
and parts of the train. (1)

During the absence of significant parts of the High Seas Fleet, the cruiser "Arkona" and the mine ship "Senta" with mines on board were placed on the Ems and in List on short-term standby in order to reinforce the local defense of the North Sea with mines if necessary. On October 6, the battleship "Baden" with the Fleet Commander, the 1st Reconnaissance Group with the B.d.A. and the 2nd Battleship Division marched to Kiel to serve as support for the operation in the eastern Baltic Sea. The management of the security service in the North Sea, the II. Admiral of the 1st Reconnaissance Group, Konteradmiral Boedicker, took over on "Niobe". From October 8th increased readiness for combat was ordered for Borkum, Norderney and Sylt.

Given the weakness of the available surface forces, enemy attacks could generally not have been repelled offensively. In order to detect enemy operations in good time, especially their local extent, air reconnaissance received special instructions that sighting and reporting should under no circumstances be impaired by offensive actions. Battleships, small cruisers and torpedo boats were advanced with distributed tasks; the cruisers and torpedo boats to secure the work in the western and north-western border area of the German Bight, the battleships to secure the work in the north.

¹⁾ The War at Sea 1914-1918, Baltic Sea III. Frankfurt/M 1964. p. 170 ff. 58

Page 44 3. The activity of the High Seas Fleet until the end of 1917

The Fleet Commander on the liner "Baden" was able to move back to Wilhelmshaven on October 15, since the disruption of the Baltic Sea operation by the English that had been taken into account had not occurred and the strong threat to the U-boat routes made the presence of the Fleet Commander in the North Sea seemed desirable. The return to Wilhelmshaven coincided with an offensive operation, the preparation of which had been initiated for some time. It made sense to support the submarines' fight against the merchant ship tonnage by surface forces attacking merchant ships. During the last few weeks and months U-boat reports had strengthened the impression that quite lively convoy traffic had developed between the Shetland Islands and Norway, roughly on the Lerwick — Bergen line Admiral Scheer decided to surprisingly attack this convoy traffic with surface forces to push no. The cruisers Brummer and Bremse were chosen for the task; they were particularly well suited for this operation because of their relatively high speed, their good radius of action and their similarity to English cruisers.

The scheduled departure of the two cruisers on October 15, 1917 via the Blue Route had to be postponed by one day because the minesweeping units were not moving fast enough on this route. The 1st Minesweeper Flotilla (Kapitänleutnant Wolfram) wanted to bypass barrier 39, seized mines from this barrier and created a 500 m wide gap in the barrier by clearing a few mines. During the further advance, the minesweeper unit encountered barrier 42. The irregular shape of this barrier meant that the 1st Minesweeper Flotilla had initially created a gap after clearing a few mines, but then repeatedly encountered new rows of mines and the final breakthrough due to the onset of darkness had to give up that day. It had now been determined that the Route under the coast through the Nordmandstief was mine-free. Due to this mine situation, the cruisers' departure was scheduled for October 16 on the way under the coast.

The operation order for "Brummer" (Frigattenkapitän Leonhardi) and "Bremse" (Fregattenkapitän Westerkamp) provided for three tasks:

- 1. Attack on the enemy convoys between Bergen and the Shetlands!
- 2. After completing this task, if necessary, attack enemy merchant shipping west of England by cruiser "Bremse" alone.
- 3. Attacking enemy naval forces in the central North Sea in case such were encountered during the advance to the main operation. In this case it was up to the leader of the operation, Frigattenkapitän Leonhardi, to decide whether the main operation against the convoy traffic should still be carried out.

It is no longer possible to determine on the basis of which *detailed* documents the order to approach the convoy traffic was given. Fregattenkapitän Leonhardi only knew that convoys were running between Norway and England.⁵⁹

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Page 45 "Brummer" and "Bremse" in front of Shetland

He had not been told how often and when the convoys ran, how strong they were, how they marched, how they were protected, and from what ports they left. Investigations made by himself had had very contradictory results. It was known about enemy naval forces that individual small cruisers and groups of destroyers had been found several times in the sea area between Skagen and eastern Scotland and that lately heavier merchant shipping had been observed on the direct route from Skagen to the Scottish ports. The torpedo boats "S 62" (Kapitänleutnant Fink), "V 83" (Kapitänleutnant v. Keyserlings, Wedig)" "S 33" (Kapitänleutnant Schmidt, Christian) and "V 26" (Kapitänleutnant Wolf, Ernst), all of the VII. Torpedo Boat Flotilla (Korvettenkapitän Cordes). "Brummer" and "Bremse" were to arrange the advance in such a way that they could attack the convoy traffic on the Bergen-Shetland route from the west as soon as it got light. The long-distance reconnaissance planned with two airships to the north and north-west to the line Lindesnes - Peterhead on the first day of operation and one pushed even further north on the second day of operation had to be omitted, as did the close-up reconnaissance by aircraft, because of the weather conditions.

The two cruisers had taken certain camouflage measures: they had been painted with a darker paint similar to the English ones and had their rigging made externally similar to the English ones. The advance started as planned on the morning of October 16. At 4 p.m. the meeting was set with a north-west course and a speed of 20 nm off Bovbjerg. Shortly afterwards the torpedo boats had to be dismissed because they could not keep the sea at a sufficient speed. It was very hazy at times, wind SW force 5 to 6, swell 5. The boats continued to advance north to wage a trade war in the Skagerrak. Wind force 10 and swell 9 prevailed in the Skagerrak, so that the use of weapons was out of the question. The traffic encountered was very little, and the torpedo boats retreated without any particular incident.

Fregattenkapitän Leonhardi had set his course so that he was about 60 nm east of Lerwick when it got light on October 17th in the morning. He had calculated the meeting point with the enemy based on the probable course of action of a convoy bound for Lerwick. Certain factors, the choice of the safest route, marching speed, the onset of twilight, and the location of the possible recording off the English coast, could be assessed with some certainty.

The considerations turned out to be correct. As the cruiser meeting stood east of Lerwick at 06:58 at dawn on 17 October, a vessel was sighted in N by E running about W by S course — two minutes later she was identified as a three-funnel destroyer. Behind him were other vehicles that were initially not recognized due to the darkness. They were soon spotted as cargo ships in a double-row formation, trailed by a second destroyer. ⁶⁰

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An armed trawler sailed to the right and left of the row. There were twelve ships, which were commanded by the destroyers "Strongbow" and "Mary Rose" and the guard vessels "Elise" and "P. Fannon". The convoy had left Norway on the afternoon of October 16th. On the morning of the 17th a fresh south-west wind blew and there was a strong swell. The air was clear and see-through.

Immediately after the destroyer in front was spotted, he made a very fast Morse signal with a small searchlight as a recognition signal. The call was repeated immediately and as indistinctly as possible by "Brummer"; during the repeated exchange of identification signals, the cruisers came closer at high speed and reached a favorable bearing the enemy characteristics of the cruisers closing and alerting the crew, "Brummer" opened fire and at the same time turned ENE course, so that the enemy came to port. "Strongbow" now ran off with extreme force and presented a very narrow target. The second salvo at a distance of 30 hm disabled "Strongbow": guns and torpedo tubes were shot up; the deck was covered with dead before the crew reached their battle stations. Hits had damaged the main steam tube, the destroyer lay motionless, shrouded in white smoke The wounded commander, Lieutenant-Commander Brooke, gave the order to abandon the boat after all classified information had been destroyed and nothing of value could fall into enemy hands, and then ordered the destroyer to be caused to sink.

"Brummer" was meanwhile steaming along the row of steamers on an EWE course in order to lay them up for the time being. While passing, "Bremse" also fired a few salvos at "Strongbow", since the latter opened fire with one of his guns, although he was already trying to launch boats. The incident took place at a passing speed of about 30 nm, so that none of the cruisers was able to direct their fire at specific parts of the destroyer.

The formation of the steamers was in disorder; the firing distances varied between 6 and 24 hm. Brummer got the impression that some of the steamers were armed with guns and were returning the fire of the cruisers. It remains to be seen whether this was a case of confusion with the fire from the nearby armored guard steamers. Most of the convoy's steamers stopped and the crews manned the boats. When the last two steamers of the southern row made an attempt to escape, "Brummer" steamed after them and laid them idle while "Bremse" was sent back to sink the remaining steamers.

"Bremse" first steamed past the convoy on the opposite course, turned to the other side after passing and completed the destruction of the steamers as they left the port. "Bremse" came close to the destroyer "Strongbow" for the second time and carried out the final destruction of the destroyer, which was still bravely defending itself.

The attitude of the crew of the "Strongbow" was exemplary; the destroyer sank with the flag waving, the stern gun fired until the last moment. ⁶¹

Page 47 Destruction of an English convoy

On "Bremse" it was also observed how a torpedo launch tube was swiveled shortly before the sinking and a torpedo was fired in the direction of "Bremse". Crew members of the "Strongbow" who have meanwhile got into a boat and people who had jumped into the water may have fallen victim to the shelling from short shots; it goes without saying that there was no intention of directing fire at them. The account of the English Historiography (1) that survivors of the "Strongbow" who were unable to fight were deliberately shot at, cannot be contradicted sharply enough.

During this time, while it was still twilight, the destroyer "Mary Rose", standing at the end of the line, had come into sight. At about 7:30 she came into sight again to the north-west "Strongbow" initially assumed that the convoy would be attacked by a submarine. He spotted the German cruisers a little later and then, after realizing the true situation, headed for "Brummer" and "Bremse" at full speed and with great enthusiasm. "Brummer" also headed for "Mary Rose" and fired on him at about 7:35 am at about 80 hm, which was returned a few minutes later. With the prevailing sea state and the overflowing seas as a result of the high speed, the artillery effect was initially not very great. When the destroyer turned to fire the torpedo, evasive movements had to be made. "Mary Rose" shot remarkably well and quickly, "Brummer" received a hit under the forecastle that caused no damage apart from minor fragmentation. However, as soon as "Mary Rose" received the first hits, its destruction was not long in coming. The boat was heavily shrouded in steam and it was first assumed that the enemy was developing artificial smoke; the destroyer had a hit in a fuel oil cell which burned the oil with a high red jet of flame and thick black smoke. Eventually, "Mary Rose" lay ablaze and was sunk by two volleys at close range. The boat was leaning to port, numerous on her starboard side bullet holes open. It had received an estimated 15 hits in all.

The commander, Lieutenant-Commander Fox, had given the order to abandon the boat after the situation had become hopeless. Despite the desperate situation, the brave destroyer, who was initially already out of danger, did everything in his power to support the convoy entrusted to her. Lieutenant-Commander Fox died by drowning.

Fregattenkapitän Leonhardi intended to take on the crew of the last destroyed destroyer when sightings of a submarine were reported. It did not seem advisable to him to tarry any longer, especially as the rescue work could safely be left to the guard vehicles and the escaping steamers. The armed steamer "Elise" initially ran out of the fire of the German cruisers, but later successfully tried to rescue the survivors, especially the people of the "Strongbow".

1) Newbolt. V. p. 155. ⁶²	
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The guard steamers "Elise" and "P. Fannon" as well as three English steamers escaped, 9 steamers of the convoy were destroyed.

The total tonnage sunk by destroying the convoy was 10,248 Br. R. T. Besides the destroyers "Strongbow" (898 tons) and "Mary Rose" (1017 tons) were sunk:

Norwegen Steamboat "Habil"			636 Br.R.T.
"	"	"Dagbsorg"	640 " " "
"	"	"Sörhaug"	1007 " " "
"	"	"Silya"	1222 " " "
"	"	"Kristine"	568 """
Swedish -		"Wicander"	1256 " " "
"	"	"Visbur"	877 """
Danish. "	"	"Stella"	886 """
"	"	"Margarethe"	1241 " " "

The destruction of the convoy had taken place in the restricted area. The neutral steamers had, however, simply by being placed under enemy escort, entitled to be stopped and carry out a search which neutral shipping is otherwise entitled to raise.

Fregattenkapitän Leonhardi had "Bremse", who had carried out the sinking of the steamers during the battle with "Mary Rose", closed up and steamed first on an easterly, then on a NE course and at high speed with the intention of what was expected from England and from the Skagerrak avoid English reconnaissance for as long as possible and then break through to the south during darkness. The march back went according to plan through the Nordmandstief. The second intention of marching back through the Skagerrak and Kattegat was abandoned after "UC 40" sighted and reported light English forces in the Skagerrak on the morning of 17 October. It would have been dangerous to pass through the Skagerrak and Kattegat in the dark because both ships generated heavy showers of sparks at speeds above 22 nm and the unnoticed breakthrough would not have been possible.

Enemy radio traffic was closely observed on both cruisers during the operation. During the night of October 16th/17th "Brummer" had picked up an enemy radio message from which only a few groups could be deciphered, but from which it emerged that a convoy with a destroyer was on its way and that a second destroyer was probably escorting it. Although this observation did not have any influence on the decisions of the commander "Brummer", it could nevertheless confirm the probability that his considerations were the correct. During the attack itself, "Strongbow" did not succeed in making an FT report due to the speed with which the combat operations unfolded and with which he received the first hit. Neither of the steamers made a radio message. However, at the time when "Mary Rose" approaching "Brummer" heard a weak FT signal, which was repeated at the request of another station and now jammed by "Brummer". If English observation stations had paid close attention, it would probably have been possible at this point in time to recognize the place and time of the action, or at least the suspicion of such action. 63

Page 49 Return of the German cruisers

However, this was not the case, because during the course of the morning English FT traffic remained within normal limits; a certain unrest was only noticed around noon; at 3:25 p.m. it was possible to determine on "Brummer" that the destruction of the convoy had become known.

The commander of the Bremse (Frigattenkapitän Westerkamp) gave up the commercial warfare west of England, which had been envisaged as the second task for Bremse, due to the fuel stocks of the Bremse. Taking into account the necessary fuel oil reserve for the breakthrough home, the cruiser still had enough fuel that she could have sailed for two more days with an average journey of 20 nm and without any particular stress from being hunted. The commander did not expect sufficient success from advancing a maximum of 480 nm, i.e. roughly into the region of the Hebrides. He doubted that he would find valuable objects there, but in this case he definitely expected that he would encounter enemy guard lines and that the level of success would be correspondingly low.

The operation of the two cruisers "Brummer" and "Bremse" was based on very little knowledge of the enemy's situation. Well thought-out considerations had led to the success of the bold operation, which served to a marked extent a strategic goal in the sense of submarine warfare.

However, there was no lack of luck either. Neither the fleet commander who had ordered the operation nor the naval forces involved in carrying it out had known how numerous and strong English naval forces had been ready to meet a German operation that was expected between October 15th and 17th. The English Naval Operations Staff had always had to reckon with the danger that convoy traffic between England and Norway would be attacked by German surface ships. However, direct protection against such attacks was not provided, since the constant presence of parts of the Grand Fleet in the North Sea was considered sufficient security. The first convoy between the east coast of England and Norway had set sail at the end of April 1917, on the basis of decisions taken in April 1917. The port of departure on the English coast was Lerwick, from where the convoys left for Scandinavia under the cover of two or three destroyers and sometimes also a few picket vessels. The Norwegian coast was approached at exchange points. The steamers dispersed there while the destroyers picked up the convoy bound for west just before dark at a rendezvous point off the Norwegian coast. They then took the steamers westward to an agreed point between Norway and Shetland, where the convoy was reinforced by a number of picket vessels. During 19.7 airships were stationed on the east coast of England for additional security against submarines. U-boat traps were also attached to the convoy to mark stragglers and attract German U-boats. English U-boats were also lying in wait near the trade route to operate against German U-boats.⁶⁴

Page 50 3. The activity of the High Seas Fleet until the end of 1917

All in all, these measures were aimed exclusively at trade-warfare submarines.

The destroyers and escorts assigned to escort had received no orders in the event of an attack by surface ships; according to British information, the destroyer commanders never gave any thought to their behavior in the event of a surface attack (1).

The detachment of strong naval forces to the Baltic Sea had not gone unnoticed by the English admiralty, and had strengthened their intention to advance mining operations as far as the German coast and the inlets of the German Bight. Admiral Beatty, Commander-in-Chief of the Grand Fleet since the end of 1916, had been commissioned to examine this plan, but had decided to proceed with a formation of light forces against the German minesweeping forces in the border area of the German Bight. In this way he wanted to prepare the recommended mining operation against the inner German Bight. In mid-October 1917, while Admiral Beatty was busy with these preparations, he received orders from the Admiralty to keep the light cruisers and a number of destroyers ready to go to sea. When the Admiralty, on the basis of very general indications, decided that a German operation in an unknown direction was imminent, Admiral Beatty was ordered to reconnoiter the entire North Sea area. On October 15, 1917, he then ordered an extensive reconnaissance and security service for the North Sea area. However, the planned formation was somewhat affected by interim orders from the Admiralty, so that the deployment of the cruisers and torpedo boat forces that finally took place during the course of October 16 did not entirely correspond to the intentions and orders given. Between morning and evening of October 16th, these were I., II., III., IV. and Vl. Light cruiser squadrons with numerous destroyers have been deployed between Stavanger and Hanstholm, between Byobjerg and Hornsriff and in the central part of the North Sea. Despite the numerous units, no closed guard was achieved, leaving a considerable gap just west of Hanstholm. When news indicated that German airship reconnaissance was planned for the 16th in the central North Sea, the battlecruiser "Furious" (2) equipped with aircraft was also sent forward to 56° latitude to reconnaissance up to 4° East. After October 16th had passed uneventfully, Admiral Beatty decided on October 17th to reinforce the security forces during the day with the battlecruisers "Courageous" and "Glorious" as well as other destroyers. Finally, on the evening of October 16th, the Admiralty ordered the approaches to Tyne and Humber to be specially guarded; for this purpose Commodore Tyrwhitt occupied the area south of 55° north between 3° and 5° east with 7 light cruisers, 3 destroyer leaders and 12 destroyers.

¹⁾ Newbolt V. p. 157.

²⁾ Under construction as a large cruiser with 4-38.1 cm, completed in 1917. The ship was then fitted with landing decks for aircraft, serving as the flagship of the Grand Fleet's Air Commander from the spring of 1918.⁶⁵

Page 51 English safeguards

The English force, in addition to the Harwich forces, finally consisted of the 3 battlecruisers "Glorious", "Courageous" and "Furious", 20 light cruisers and 39 destroyer leaders and destroyers; it was enormous considering the fact that the Admiralty reckoned with only small advance forces from the German side. The English side expected little more than "one minelayer and a handful of destroyers (1)". Since "Brummer" and "Bremse" had already left the part of the central North Sea that was mainly occupied by English naval forces on October 16 and the IV Light Cruiser Squadron intended for Bovbjerg with 2 instead of 6 destroyers and without the cruiser "Caradoc", which had lost contact during the night and only reached its position on the evening of October 16 instead of in the morning, there could be no contact with the German cruisers as they advanced. A collision could have occurred on the return march. It had been essential for the unnoticed breakthrough that none of the destroyers, guards or steamers standing with the convoy had succeeded in radioing an alarm signal. The German radio personnel's attention to Brummer and Bremse, who had prevented any attempt to transmit radio messages by means of planned jamming, had been of particular value.

By the morning of October 17 the Admiralty in London had had no indication of the nature of the expected German operation. When no report arrived, the thought arose that it might be an attack on the England-Norway convoy instead of the expected mining operation. The Admiralty now ordered the convoy to be detained in port at Lerwick, an order which led Admiral Beatty to inquire as to the reason for this order and whether all the convoys, east and west, were to be immobilized. At 1:30 p.m., while Admiral Beatty awaited an answer to his question, the escaped surveillance vessel "Elise" was picked up by two destroyers which had left Lerwick with an eastbound escort. Despite the slight prospect of capturing the German cruisers, Admiral Beatty tried to close the gaps in his cruiser formation. The orders for this were given at 5:15 p.m taken at 4.30 a.m. The German cruisers had already broken through before the orders could take effect.

Breaking into the path of the Scandinavian convoys had operational and tactical consequences. Admiral Beatty did not consider the improvement of the direct escort as easily possible. In his opinion, the only way to prevent a surface attack from being repeated by light forces was to constantly secure the sea area south of the convoy route by cruiser forces. However, he did not think it was necessary to set up permanent security at the time. He therefore suggested strengthening the U-boat guard off Bovbjerg, since this was the most likely place for German raiders to break out.

¹⁾ Newbolt V. p. 151.66

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It was also promised that the sea area south of Lerwick-Bergen would be monitored as frequently as possible. These measures were not a significant improvement of the previous situation, they only took the incident of October 17, 1917 into account one-sidedly and insufficiently.

The brave use of the two destroyers "Strongbow" and "Mary Rose" had corresponded to the best English traditions, but without having led to any success. On the contrary: as a result of the daring operation, the two destroyers were unable to carry out their essential task of reporting the attack and thereby enabling appropriate and sufficient countermeasures. There is no doubt that they would have rendered better service in this way and by participating in the rescue work after the departure of the German cruisers. As a result of the behavior of "Strongbow" and "Mary Rose" the following order was given for the future: "While destroyers must do their utmost to damage the enemy, they shall not engage against superior forces. They should use their speed to stay at a safe distance from the enemy. They cannot protect a convoy after it is scattered, and they shall not be sacrificed in vain (1)."

The "Brummer" and "Brake" attacks also brought the possibility of raids on Atlantic convoys by surface forces into the Admiralty's field of view. A higher state of readiness was ordered for the cruisers waiting for escort duty in English ports, and the Commander-in-Chief of the Grand Fleet was continuously informed of the position and movements of all convoys east of 25° West. Further setbacks were necessary before energetic steps were taken to protect the Scandinavian convoys directly.

After his return to the North Sea, Admiral Scheer had issued restrictive orders for the readiness of ships lying at outposts in order to reduce coal consumption in the interest of the overall warfare. This militarily undesirable decision had been made easier by the fact that no attempt to break into the German Bight had been made during the weeks when the German Bight was being laid bare by strong naval forces - a fact of which there could be no doubt in England. Admiral Scheer thought he could attribute the English reluctance to heavy mine contamination.

The new orders for Outpost Forces came into force on October 22, and the Post of Chief of Outpost Forces vacated during the Ösel period was restored. The Naval War Staff had decided on the same day that operations on the islands off the Bay of Riga were over. All forces of the High Seas Command returned to their former ratio.

After the final dissolution of the special unit on November 3, 1917, operations in the Baltic Sea were again directed by the Commander-in-Chief of the Baltic Sea Forces.

1) Newbolt V. p. 1	59. ⁶⁷
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Page 53 Cruising trips of the High Seas Fleet

After repairing the damage caused by grounding and hits by mines during the Baltic Sea operation, the High Seas Fleet was again fully assembled in the North Sea in the second half of November, with the exception of the battleship "Bayern". The Battleship "Bayern" launched on October 12, 1917 in the Baltic had run into a mine, rejoined the III. Squadron.

The thrust ordered at the end of October 1917 to determine the mine situation increasingly claimed the entire High Seas Fleet. The B.d.A., who, as head of security, had been assigned the task of carrying out the thrust, had determined various ways and directions for this: in periods of good weather, as many minesweeping units as possible should take part at the same time. The High Seas Torpedo Boat Flotillas with equipment suitable for finding deep-lying nets sailed directly behind each thrust voyage group, small cruisers followed in optical contact as far as possible. Ships-of-the-line and armored cruisers stood in support positions by special order. Airships reconnoitred the well-known yellow and blue routes, while aircraft were assigned to each group.

In addition to this defensive measure, advances of light forces against suspected enemy forces on the western border of the English restricted area were planned for longer nights in order to seize the enemy in the rear with forces coming from the north or south.

On November 2nd and 3rd, thrust were made in two directions for the first time, namely from the I. and III. Minesweeping flotilla from Hornsriff to the west and by the auxiliary minesweeping flotilla from Heligoland to the north-west. In addition to torpedo boat formations and light cruisers, "Derfflinger", "Rheinland", "Nassau", "König Albert" and "Kaiserin" were scheduled. The cruisers had taken aircraft on board. The 2nd Admiral of the 1st Reconnaissance Group, Konteradmiral Boedicker, was in charge of the operation on "König Albert". Both thrusts resulted in mine-free routes. The formations involved anchored at sea at night and were scheduled for two more thrust voyages the next morning. The I. and III. Minesweeper flotilla pushed north from Hornsriff and found a tight barrier 25 nm NW by W Hornsriff. In an attempt to circumvent the barrier, they again encountered a new tight barrier 15 nm NNW Hornsriff lightship. Getting through on this northern route without clearing barriers was not possible at first, while the route from Hornsriff to the west was open.

At noon on November 2nd brisk Danish F.T. traffic began in the Baltic Sea, from which it was concluded that English destroyers and cruisers had engaged with German ships. The Danish waters were temporarily closed to submarines on the suspicion of a mine operation against the U-boat exit routes from the Baltic Sea. The next day the news came that the auxiliary ship (submarine trap) "Kronprinz Wilhelm" which was leaving the Kattegat had encountered at least 10 English destroyers in hazy weather and was destroyed after a brief firefight.

At the beginning of November 1917 there was a fundamental change in security and outpost service; Approach of outpost forces or sub-operations was ordered directly from the command of the high seas forces in the future. ⁶⁸

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The planned cover of the U-boat escort service and the minesweeping work required in most cases stronger naval forces. The Chief of the Outpost Forces, who lay at the outer roadstead without telephone or telegraph connection, was not always in a position to overlook the basic requirements and intentions of the agencies involved. It was expedient to put the fleet command, which usually worked with land connections, in the foreground as the command post.

On November 12, the first major torpedo boat operation for the November new moon period took place. The I. F. d. T., Commodore Heinrich; involved the two cruisers "Stralsund" and "Brummer" as well as parts of the II., IX. and VII Flotilla. The torpedo boats were divided into three main groups, one of which advanced to the north of Dogger Bank, another to the west of Dogger Bank, and the third, the strongest group, into Hoofden. The latter split north of the Maas lightship about level with Ijmuiden into three subgroups, each consisting of four boats, which in turn radiate independently advanced into the line between Nordhinder and the Maas lightship. The operation was directed against the frequently reported commercial traffic, in particular the escort traffic in the Maas-Norhinder lightship area was to be hit. In addition, the patrol service and fishing in the western and southwestern part of the Dogger Bank were the objectives of the enterprise. The result was poor because, apart from a few fish loggers encountered by the western group of the IX. Flotilla were caught and sunk in the restricted area — the crews were brought in — no traffic was encountered.

On November 16, the commander of the II. Flotilla, Korvettenkapitän Heinecke, carried out a night advance into the Hoofden. The advance group was to reach the line between Nordhinder and Maas light ship if possible and attack the enemy escort traffic. After the experience of the last advance, the destroyers with neutral ships did not have to be in the restricted area in order not to delay the advance unnecessarily. This advance, which was carried out according to plan by the 2nd Flotilla with the boats "B 97", "V 100", "B 110" and "G 104" between the morning of November 16th and the morning of November 17th, failed the expected result. Around 50 vessels, mainly fishermen, were passed between the Maas light buoy and the Haars lightship.

The experience of the turnarounds carried out at the beginning of November led to some fundamental changes in the planning of such trips. In the future, the instructions for the thrust only had to be given in very general terms; the execution of the individual tasks was to be left directly to the sea commander on site. Since the thrust voyages required numerous armed forces of all kinds and thus greatly interfered with the overall dispositions, overall management remained with the High Seas Forces Command from now on. Air traffic control by airships or airplanes was fundamentally a prerequisite for day trips. The leader of the raid group, generally the leader of the II or IV reconnaissance group at the outpost, had to inform the commander of the covering forces in good time of intentions and wishes for the deployment of the covering force, which was to consist of battlecruisers or ships of the line for each raid group. ⁶⁹

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Torpedo boat bursts into the Hoofden

The participating armed forces were required not to show themselves on the outskirts of the English restricted area and, depending on visibility, only advance up to about 20 nm from the restricted area border. When advancing, the branch route was to be marked in such a way that cover forces could follow; under certain circumstances, torpedo boats were to be interpreted as mark boats. The raid trips were to be ordered by the fleet command by radiotelegraphy. On the basis of this order, the head of the raid group had to order the time and assembly point, the senior naval commander of the outpost service to advance the cover forces and the leaders of the flying formations to order security.

The battle in the German Bight on November 17, 1917

On November 15, under the new orders, the Fleet Commander ordered a raid run to take place either on November 16 or as soon as the weather permitted. The starting point was square 058 *beta* at the bottom right and N by W rw as the advance course. Participants were the guard's minesweeper flotilla and the half-flotillas of the auxiliary minesweeper flotilla on watch, as well as a torpedo boat flotilla and the light cruisers on outposts. On the evening of November 15, the leader of II Scouting Group, Konteradmiral von Reuter, announced that the raid on November 16 had to be canceled because of the weather conditions—strong north-westerly winds of up to force 8 prevailed. On the evening of November 16, he ordered through F. T.: "the raid on November 17 planned, armed forces involved stand at the starting point at 7 a.m., minesweepers with deployed equipment, II. Reconnaissance Group leaves Schillig-Reede at 12.30 a.m.." The IV. Barrier Breaker Group (Kapitänleutnant d. R. Hildebrand) should control the advance course of the stabbing group. The commander of the IV Squadron divided off the two battleships "Kaiser" and "Kaiserin" as battleship meetings for cover.

Because of the unequal speed of the minesweepers and the trawlers of the auxiliary minesweeper flotilla, the commander of II Scouting Group had requested that the latter not be allowed to take part in the raid. However, the fleet commander insisted on the ordered participation.

On the morning of November 17, the sea was slightly turbulent in the area of the ordered assembly point, wind W force 2, somewhat hazy. Airship reconnaissance did not take place because of the weather conditions. The command of the leader of the II Scouting Group to take aircraft on board the cruisers "Königsberg", "Nürnberg" and "Frankfurt" at Schillig-Reede on the afternoon of November 16 had not been carried out, because the planes could not fly to Schillig because of bad weather. ⁷⁰

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At 7 a.m. on November 17, the Borkum and Norderney seaplane bases reported their intention to have planes take off; 4 aircraft took off from Norderney at 6:55 a.m., but were soon returned due to the fog. Based on the reports received from Borkum and Norderney, the leader of the II. Sea Flight Station Borkum later had to report that the intended reconnaissance could not take place because of fog.

The A-boats of the auxiliary minesweeper flotilla, namely "A 63", "A 68", "A 69", "A 74", "A 41" and "A 52" were the first to meet at the rendezvous on November 17 at 6 a.m. arrived under the leadership of the chief of the 4th Auxiliary Minesweeping Half-Flotilla (Kapitänleutnant z D. Löwe, Joachim). They continued slowly on the ordered advance course N by W rz. Since it was still dark and the other groups could not be seen, they turned around after a while and were back in position at 7 a.m., where they met the 6th Minesweeping Half-Flotilla (Kapitänleutnant d. R. d'Ottilie) with those from the 5th and 6th Minesweeping Half-Flotilla boats "M 66", "M 7", "A 36", "T 74", "M 53", "M 4", "M 3" and "M 1". The 6th Minesweeper Half-Flotilla and the Auxiliary Minesweeper Half-Flotilla deployed the device; when the II Reconnaissance Group arrived, both halfflotillas were ready to approach. The trawlers of the 2nd and 6th Auxiliary Minesweeping Half-Flotilla were not in the ordered position in time due to rough seas and navigational discrepancies, they stood back about 10 nm to the south-east. The II. Reconnaissance Group with "S 62" and "V 43" as U-boat backup came into sight at 7:35 a.m. as it got light and sat down about 2 nm behind the minesweeper unit. At 8 o'clock the leader of the II Reconnaissance Group stopped to wait for the trawlers of the 2nd and 6th Auxiliary Minesweeping Half-Flotilla; Shortly thereafter he decided to take in the trawler with "Königsberg" and set off to the south-east at 8:23 a.m. and made the signal to the II Reconnaissance Group: " "Nuremberg is in the lead, the formation will wait here."

The outpost steamer "Kehdingen" of the S-Group of the North Sea Outpost Half-Flotilla had anchored at 6.5N NNW of the assembly point near the advance point to mark the approach, the outpost steamer "Fritz Reuter" with the leader of the 1st S-Group, Lieutenant z. S. Woldag, secured the position.

At 8:00 a.m., the IV. Barrier Group with two barrier breakers and two torpedo boats ("V 83", "G 93") of the 14th Torpedo Boat Half-Flotilla, which was supposed to advance to the restricted area border, was still about 55 nm south-east of the assembly point.

The English Admiralty was of course not ignorant of the general methods used in German operations in the outer mine belt. It was therefore considered how damage to the numerous weakly armed minesweepers and the securing cruisers and destroyers could be carried out.⁷¹

Page 57 English fleet advance into the German Bight

When reports from "agents and U-boat commanders (1)" in mid-November made it known that an extensive mine operation was imminent, this opportunity was to be exploited by immediately advancing fast and strong naval forces from Rosyth for an energetic strike.

The Admiralty had ordered the morning of November 17, 1917 to begin the operation; the Commander-in-Chief of the Grand Fleet issued the necessary orders on the morning of November 16. Intended to participate were:

- I. Battlecruiser Squadron: "Lion" (Admiral Pakenham), "Princess Royal", "Tiger", "Repulse" (Admiral Phillimore), "New Zealand", plus my cruiser "Champion" and 8 destroyers.
- I. Cruiser Squadron: "Courageous" (Admiral Napier), "Glorious" and 4 destroyers.

 VI. Light Cruiser Squadron: "Cardiff" (Admiral Aleiander-Sinclair), "Ceres", "Calypso",

 "Caradoc" and 4 destroyers.
- I. Light Cruiser Squadron: "Caledon" (Commodore Cowan), "Galatea", "Royalist", "Inconstant" and 2 destroyers.

Furthermore, for support in a recording position about 50 nm away

I. Battle Squadron with the battleships "Revenge", "Royal Oak", "Resolution", "Emperor of India", "Benbow", "Canada" and 11 destroyers.

At 9 am on November 17, all cruiser forces were to be at 6° 0' East, 55° 0' North and upon reaching this point advance NNW. The cruiser assembly point was somewhat outside the middle of the English mine belt between Hornsriff and Terschelling. The reception position of the 1st English battle squadron (ships of the line) was at 56° 0' north, 6° 0' east, free from the northernmost English mine barriers and set far to the east from the German Dogger Bank barriers.

After the I. Battle Squadron had united with the rest of the armed forces in Rosyth on the afternoon of November 16, ships of the line and cruisers with their torpedo boats left Rosyth at 5:30 p.m. on the 16th. The cruiser group approached the advance point on November 17 at 8 a.m. as planned near the mine belt; the formation was on an easterly course. The I. Cruiser Squadron and the 1st light cruiser squadron were positioned one behind the other at a distance of 3 nm, port ahead at a distance of about 2 nm from the I. Cruiser Squadron, the VI. Light cruiser squadrons and to port aft at 10.5 nm distance the I. Battlecruiser Squadron. Vice-Admiral Pakenham was in command of the cruiser unit, while the battlecruisers "Courageous" and "Glorious" and the light cruisers were subordinate to Admiral Napier.

The cruiser forces' task of advancing NNW from the assembly point presented no difficulties with regard to the danger of mines. The situation became less easy, however, when encountering German forces it was necessary to advance east and south because the records of the commanding English admirals were inadequate for an advance into or through the mine belt.

The War at Sea 1914-1918; "The North Sea", Volume VII

1) Newbolt V. p. 165.⁷²

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This lack of preparation is all the more remarkable given that the advance was intended to be directed against German minesweeping forces, which were suspected to be on the outer corner of the mine belt.

According to English sources, it is not clear whether Admiral Pakenham had the Admiralty's monthly mine chart on board or whether he had only inspected this chart with all English and detected German mine barrages: an occasional glimpse of the mine map could hardly have been a sufficient basis for practical decision-making. Admiral Pakenham was well aware, however, that in the area in question German mines had to be treated less than English mines. In any case, the English Naval War Histories assumes that Admiral Pakenham had "sufficient knowledge to know that his ships were able to penetrate about 30 nm into the mine area, so far as to avoid the large minefields which lay on the north-east side of a line drawn south-east from the assembly point (1)".

The admirals and commanders, who were not usually shown the admiralty chart, had to keep their utility charts up to date on the basis of pronouncements from the Commander-in-Chief of the Grand Fleet. These publications contained only general information about the areas designated as vulnerable.

Admiral Napier, commander of the 1st Cruiser Squadron, knew the mine areas bordering on the assembly point; but he could not assess the extent of their danger. His mine map included the 1917 mine areas; It also described the area in which English mines had been laid west of Sylt in the years 1915/16 and the sea area in which mine barriers with sinking devices had been laid for 38 days in January 1917 as mine endangered. These sea areas could practically no longer be considered as danger areas. Without being able to assess the degree of danger in the individual mine zones, Admiral Napier finally came to the conclusion that he could advance about 12 nm south-east from the cruiser assembly point to the boundary of the mine area marked on his map.

The commanders of the I. and VI. Light Cruiser Squadrons knew absolutely nothing about the details of the presumably endangered area west of Sylt, it was not noted on their charts. In an earlier order, the Commander-in-Chief of the Grand Fleet had stated that the area south of the assembly point of November 17th could only be passed if information about minefields and dangers in this area had been issued.

None of the sea commanders involved were informed about the paths broken through the mine belt by German minesweepers. A mine map kept by the Commander-in-Chief of the Grand Fleet was only available at this office; none of the parties involved was aware of it on November 17.

Page 59 Combat contact with the cover forces

The operations order for the operation on November 17 did not contain any information on this either, it only stated in the reports from the enemy that German submarines kept to certain routes between the northern tip of the Shetland Islands and the Doggerbank North lightship. The difference in knowledge of the extent and degree of the mine threat must have caused the commanders to make differing assessments of the situation.

Apart from the lack of briefing on the mine situation, the Admiralty had excellently initiated the operational approach of the naval forces involved according to location and time. On one of the three days in November when thrust voyages were carried out to the outer mine belt, the English cruisers came across the German thrust voyage group at the right time and in the right place with a strong advantage. This was probably the result of the detailed German FT orders with precise information about the place and time of the thrust voyage, as issued in particular by the High Seas Fleet and II Scouting Group.

A few minutes after the leader of II Scouting Group, Konteradmiral von Reuter, had turned to the south-east with "Königsberg" (Fregattenkapitän Feldmann, Karl) in order to bring in the missing minesweeping forces, at 8:35 a.m. the commander, Kapitan zur See Hildebrand, who was in charge of the Red Unit, observed the thunder of artillery and the impact of heavy projectiles on the port side ahead. Visibility was worse to the west than to the east, visibility about 5 nm, wind force 2 west, swell force 1-2. At 7:40 a.m., even before "Königsberg" had separated from the formation, "Pillau" had sighted seven clouds of smoke in the west. They had not been reported, as they were believed to be smoke deposited from the minesweepers. A few minutes before heavy impacts hit the light cruisers and gunfire was heard, "Pillau" sighted two and then three vessels to the west at 8:28 a.m., which were approaching at high speed. The larger vehicle in the center was addressed as an armored cruiser or ship of the line. "Pillau" announced "Ready ship for action", but before any report could be made, impacts rang out 200 m from "Pillau" (1).

To the north-west on the horizon, blurred shapes of several ships, apparently of different sizes, appeared. Kapitän z. S. Hildebrand immediately went to the outermost with "Nürnberg", steamed up at the "Pillau" standing in front of him and, fully aware of his task of having to use the cover forces to protect the heavily threatened minesweepers, handed over to "Pillau" (Frigattenkapitän von Gaudecker) and "Frankfurt" (Frigattenkapitän Seidensticker) gave the signal command "Follow the leader" (Z zero). In the order "Nuremberg", "Pillau", "Frankfurt" the cruiser formation turned with extreme force to 347° in order to get between the enemy and the minesweeping formations.

¹⁾ See Maps 4 and 4a in the Appendix of this volume. The two maps illustrate particularly clearly the different views of the course of the battle on the German and English sides.⁷⁴

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Torpedo boats and minesweepers, however, soon became so heavily fogged that all prospect ahead was obliterated and friend and foe alike went out of sight. In order not to crash into their own boats, which were shrouded in dense fog, and to be able to observe the movements of the enemy, they turned to port in the direction of the wind and set a westerly course. At about 8:40 a.m. the enemy was spotted at a distance of about 110 to 120 hm: 5 ships, apparently armored cruisers and cruisers, which immediately opened a strong and well-placed fire, which was returned by "Nürnberg", "Pillau" and "Frankfurt".

The boats in front of the 4th Auxiliary Minesweeping Half-Flotilla and 6th Minesweeping Half-Flotilla, as well as the armed steamer "Fritz Reuter" and probably also "Kehdingen" saw the enemy pretty much simultaneously: "A 63" of the 4th Auxiliary Minesweeping Half-Flotilla (Kapitänleutnant z. D. Löwe, Joachim) observed several larger vessels to the north-west at around 8:35 a.m., which were quickly approaching on an easterly course, initially took them for their own trespassers and reported his observation using searchlights; "M 53" (Lieutenant z. S. d. R. Schober, Wilhelm) reported heavy clouds of smoke in the west at the same time. The reports went to "M 66", the command boat of the 6th Minesweeping Half-Flotilla (Kapitänleutnant d. R. d'Ottilie). This boat, which was also in charge of the local search group, had been called alongside by the "Königsberg" shortly before 8 a.m. in order to be briefed verbally on how to proceed until the arrival of the 2nd and 6th Auxiliary Minesweeping Halfflotilla. According to this, "M 66" was instructed to stay close to the II. Reconnaissance Group. Immediately after "M 66" had understood the reports from "A 63" and "M 53", shells fell about 800 m to port abeam of "M 66" and in the vicinity of the search group in front. During the absence of "M 66" "M 53" had taken over the command of the 6th minesweeping Half-flotilla. As soon as the danger was recognized, both semi-flotilla commanders gave the order to tow the gear. The strength of the enemy was estimated by all quarters to be very considerable. Lieutenant z. S. D. Löwe on "A 63" had identified the enemy as hostile and the vehicles very soon after making the above-mentioned report "Clearly recognized as ships of the line and armored cruisers for 60 km, including ships with lattice masts, numbering about twelve large ships, and numerous clouds of smoke behind and to port abeam". From the chief of the 6th minesweeping Half-flotilla, Kapitänleutnant d. R. d'Ottilie, simultaneously with the impact of several heavy-caliber projectiles, "funnels and bows of three large three-funnel ships, apparently armored cruisers, were seen with the naked eye". In fact, the first vehicles sighted were the two battlecruisers "Courageous" and "Glorious" with their accompanying torpedo boats.

It was fortunate that the advance of the raid group, which had been ordered for 8 o'clock, had not started punctually because of the delay in the two half-flotillas of the auxiliary minesweeper flotilla. Otherwise the enemy would have pushed into the line of retreat of the German naval forces, because the assembly point ordered by the English for 9 a.m. was exactly 6 nm north of the German starting point for 8 a.m. and in the direction of the advance of the thrust voyage group planned on course N by W. 75

Page 61 Danger for the minesweeping formations

At 8:30 a.m. the lookout on "Courageous", the flagship of the 1st cruiser squadron, was the first to look out for "Cardiff", the flagship of the VI. Light cruiser squadron, German naval forces sighted. Observation and assessment of the German naval forces were initially uncertain; the assumption that between the northern group of minesweepers and the southern group of cruisers that a German group consisting of U-boats was still standing was incorrect. "Courageous" and "Glorious" opened fire with heavy artillery on the starboard side at 8:37 a.m. on the German cruisers. "Cardiff" and the destroyers securing this group of cruisers turned away against the minesweepers from the outset. The first volleys fell between the cruisers and minesweepers, sometimes not far from the latter. Due to the narrowness of the battlefield, several impacts of heavy calibers, which were aimed at the German cruisers, were also observed near the minesweepers in the further course of the action.

The M- and A-boats towed their gear and turned to easterly courses under the development of fog. The A-boats to the west tried to push between the M-boats and the approaching cruisers. "Fritz Reuter", which was 500 m away from "Kehdingen" with its bow to the west, had immediately turned to the opposite course when sighting the rapidly approaching battlecruisers. "Kehdingen" and "Fritz Reuter", who had both thrown fog buoys, steered along the edge of the gradually developing fog. At first the boats only occasionally managed to find cover in the fog. Shots were fired on sighted enemy destroyers, as well as on the M and A boats, without the effect being able to be assessed. "Fritz Reuter" finally managed to evade enemy action using a heavy use of smoke of its own, while "Kehdingen" was shot down soon after the start of the battle. Most of the crew including the commander, Lieutenant z. S. von Bredow (Hermann), was rescued by English destroyers sent by Admiral Pakenham for this purpose and became a prisoner of war.

Shortly after the "Courageous" opened fire; on the "Lion", the flagship of the 1st Battlecruiser Squadron, which was further behind, an enemy report had arrived from Admiral Napier. From this still very general report and the thunder of gunfire, Admiral Pakenham was initially unable to form any idea of the strength of the enemy forces. But even the cruiser formations attached to II Scouting Group only occasionally recognized individual ships in the smoke and fog, which quickly disappeared again, at first they could only head for the smoke screen in order to gain closer contact with the enemy; individual reports from the light cruisers gave only general bearings. For a short time, "Courageous" and "Glorious" steered north, as Admiral Napier suspected the German cruisers to be on an N and NW course. Until 9 a.m. the battle situation developed in an unregulated and confusing manner; a torpedo fired from the destroyer "Ursa" shortly before 9 a.m. had no prospect of success. Shortly after 9 a.m., following reports from Admiral Napier, Admiral Pakenham dispatched the battlecruiser "Repulse" to support the 1st Light Cruiser Squadron.⁷⁶

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The torpedo boats on the German side were particularly active, standing directly behind the minesweepers with deployed submarine kites to locate nets. There were the boats "G 87" (Oberleutnant z. S. Komorowski), "G 92" (Kapitänleutnant Arthur von Killinger), with the chief of the 14th torpedo boat half-flotilla (Kapitänleutnant Beitzen, Richard) on board, and "V 45" (Kapitänleutnant Lassmann). When the boats spotted the enemy cruisers and destroyers and the minesweepers turned to the east and south-east under towing gear, "G 87" and "G 92" immediately advanced beyond the minesweeper half-flotillas, developed fog and took the nearest destroyers under artillery fire. The distance to the enemy was 70 to 50 hm. The dashing action of "G 92" and "G 87" in the direction of the superior advancing enemy to fog the minesweepers who were in great danger was perceived by them as a relief.

"V 45", which soon after sighting the enemy battlecruisers believed it had an opportunity to fire torpedoes, turned to starboard to cover the minesweeper half-flotilla, smoked, fogged and turned hard to port to fire the torpedoes (1). ""G 92", "G 87" and "V 45" then joined the second reconnaissance group, which was advancing against the enemy, after "V 45" had once again used the opportunity at 8.46 a.m. to fire a torpedo at the enemy line (1).

The energetic measures taken by all the cover forces involved had achieved their purpose. The operational advance of the Kapitän z. S. Hildebrand, with the three cruisers closest to the enemy, had distracted strong and vastly superior enemy forces from the minesweepers. The actions of the torpedo boats had more or less hidden the minesweepers from the enemy's view.

At 8:35 a.m., the "Königsberg", which was advancing to the south-east, noticed gunfire and flashes of volleys in a north-westerly direction and observed medium and heavy caliber impacts near the "Pillau", "Frankfurt" and "Nürnberg", which were about 2 nm away. There was no sign of the enemy themselves. Konteradmiral von Reuter immediately turned his flagship to a north-westerly course in order to catch up with II Scouting Group and at 8:53 made the signal: "Course SE, follow the leader".

The destroyers that the English VI. Light cruiser squadrons secured and maintained contact for a while with the minesweepers steaming to the east and south-east. The A-boats of the auxiliary minesweeper flotilla (Kapitänleutnant Löwe, Joachim) moved away on an ESE course and between 8:50 and 9:02 a.m. they had skirmishes with the northern group of enemy destroyers over a distance of 96 to 98 hm. The A-boats felt that their well-aimed fire, in which three hits on destroyers were observed, compelled the enemy to turn away. The boats then came under fire again between 9:05 a.m. and 9:30 a.m. by a destroyer command ship and then entered without further harassment from the enemy.

) No hit result. ⁷⁷

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Cover over minesweepers

The 6th Minesweeping Half-Flotilla (Kapitänleutnant d. R. d'Ottilie) steamed off to the east in heavy smoke and fog. He also came into action several times with destroyers at distances between 70 and 35 hm. An advance by three destroyers even temporarily brought them up to very close range without the English destroyers scoring any hits, while the M-boats certainly believed that they had observed their own effect of hits. At 9:45 a.m. the English destroyers let go of the M-boats. The 6th Minesweeping Half-Flotilla then returned without further contact with the enemy.

"Fritz Reuter" sailed in his own dense fog until 11 a.m.; when he ran out of the fog a bit, at 10:30 a.m. he saw four enemy destroyers at a distance of 30 hm. "Fritz Reuter" then returned without further encounters.

The 2nd Auxiliary Minesweeping Half-Flotilla (Kapitänleutnant D. R. Klose) and the 6th Auxiliary Minesweeping Half-Flotilla (Kapitänleutnant D. R. Witte), which had not reached the 8 o'clock rendezvous point in time, thought they were further north than the case; the long night march and the low speed of the trawlers were the cause of this delay. When at 8 a.m. the half-flotillas did not see the sent out post boats "Kehdingen" and "Fritz Reuter" to indicate their position, nor any other of their own forces, they turned around at 8 a.m. and steered a south-easterly course at a slow speed. At 8:35 a.m., when they saw gunfire in a northerly direction and soon afterwards volley after volley, they continued on a south-easterly course until, at around 9 a.m., they sighted their own cruisers and torpedo boats in a battle with English forces on the right astern. The boats took an easterly course and parted, properly avoiding the battle. The battle was rapidly approaching. The possibility of sinking the steamer had to be reckoned with. At about 9:40 a.m. the 4th Auxiliary Minesweeping Semi-Flotilla approached. Enemy forces armored cruisers, light cruisers, and torpedo boats—could be made out clearly at times, and it appeared that some enemy destroyers were in pursuit of the trawlers. These eluded the pursuit due to fog, especially since the battle of the ships gradually moved southwards away from the minesweeping half-flotillas. After this critical escalation of the situation at 9:40 a.m., the two half-flotillas returned to their home ports without further contact with the fighting.

The cover of those closest to the enemy mine sweepers were secured around 8:50 a.m. In order not to be cut off from the line of retreat, "Nürnberg", "Frankfurt" and "Pillau" made a combat turn to port to the current combat at a combat distance of about 130 hm under heavy enemy fire. It was turned first to an easterly course, then to a southeasterly course to increase distance from the enemy. The association rallied on the "Königsberg", which was initially still 15 nm on the same course. On a south-easterly course, a running skirmish developed to starboard astern, both sides running at high speed; Wind WNW, force 3.⁷⁸

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Konteradmiral von Reuter was initially not sure whether there were battlecruisers among the pursuing enemy cruisers. Only when "Nuremberg", which was closer to the enemy, reported at 9:25 am that "I am engaged in combat with heavy enemy forces", the situation was clarified to some extent. The view to the aft was severely disturbed by fog and smoke. From time to time one could also see a single battlecruiser from "Königsberg", number and type could not yet be determined. The cruisers of II Scouting Group stood in a blunt echelon, line bearing about NNE at wide intervals, the torpedo boats in loose formation in fire lee. Konteradmiral von Reuter wanted to draw the enemy away from the minesweepers heading east by taking a southeasterly course. Severely hampered in firing by the veil of fog, the enemy had to steer more southerly courses to reach the windward edge of the fog. This movement led the enemy with his main forces from the minesweepers. As was to be expected, he followed the more valuable cruisers. There was the incorrect impression that the enemy was moving out of the smoke and fog veil at a speed of about 33 nm. When the battle of the cruisers approached the trawlers of the 2nd and 6th Auxiliary Minesweeping Half-Flotilla at 9:50 a.m., the cruisers closest to the minesweepers "Nürnberg" and "Pillau" used smoke bombs to protect them, and the 14th Torpedo Boat Half-Flotilla smoked the trawlers. The enemy destroyers, which had just come close to the trawler half-flotilla, turned away before the fog, and the minesweepers were able to escape the dangerous situation to the ENE.

At 9:05 a.m. the first shells had landed in the vicinity of the "Königsberg". Apart from muzzle flashes, nothing was to be seen from the enemy at first. At 9:08 a.m. "Königsberg" opened fire on a destroyer for a short time at a distance of 150 hm, but it soon had to set because observation was impossible. Between 9:14 a.m. and 9:31 a.m. "Königsberg" was constantly in covering salvos of medium and heavy caliber, which were avoided by course changes; depending on visibility, a small cruiser or one of the large ships was fired at distances between 130 and 100 hm. As the battle continued, the enemy line had surrounded the German naval forces and was apparently following them at top speed on a SE course.

The three cruisers, which were closer to the enemy, had been under heavy enemy fire from 8:35 a.m. onwards. Their advance towards the enemy reduced the battle distance to 110-120 hm. "Pillau", which had not correctly recognized the combat turn to port on a SE course due to smoke, had turned beyond the southeast. While turning, "Pillau" opened fire at 8:50 a.m. on the starboard side at 60 to 70 hm on the front battlecruiser and believed to have observed a hit in the forecastle after two volleys. As she continued to turn, "Pillau" occasionally got into a fight with the port battery, the enemy was almost astern. At that moment, the starboard first gun, which was not firing, received a heavy hit against the front wall of the protective shield.⁷⁹

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Battle of II. Scouting Group

The shield was badly shattered, the gun was stationary, the gun commander was killed, two men were thrown overboard and three men were slightly wounded. "Pillau" now turned to starboard on a south-easterly course, and fog was switched on with the port fog machine.

The II Reconnaissance Group left at full speed to the south. Covering and nearby heavy and medium impacts of superior enemy artillery were observed on all ships. It was not possible to gain an exact picture of the enemy, but all cruisers were aware of the presence of battlecruisers with heavy artillery. It was more or less unanimously recognized that the English battlecruisers initially stood in the middle, with a formation of light cruisers on either side. Estimates of the numbers differed somewhat.

The targets that were fired at by the individual cruisers varied greatly. With extensive smoke development, which was initially carried out to protect the minesweepers and later to cover oneself, the enemy often came out of sight. The ships emerging from the haze and fog were fired upon for the brief periods in which they could be seen without a uniform spread of fire. At the beginning of the battle in particular, shots were fired at enemy destroyers appearing astern, with "Nürnberg" believing that around 9 a.m. he had definitely observed hits. In the combat sector between 9 a.m. and 9:50 a.m. all cruisers at a distance of 120 hm had destroyers, small cruisers and Battlecruisers were fired upon. The superior enemy effect was weakened with good success by energetic steering of zigzag courses. As a result of these uneven courses of the individual cruisers, the unit pulled apart considerably. The "Pillau", which was running better, pushed ahead of "Frankfurt" at about 10 o'clock and joined up with "Königsberg".

The enemy battlecruisers "Courageous" and "Glorious", which had followed hesitantly at a speed of only 25 nm, came in strong stern bearings in the course of the battle until at 9:40 a.m. they lost contact with the battle by a sharp turn to the northeast until around 10 a.m. The light cruiser formations followed this movement of the 1st cruiser squadron to the north-east only by staggering slightly to port. However, between 9:40 and 10:00 they also increased the distance from II Scouting Group and kept bearings 3 to 4 points more astern than astern. The VI Light Cruiser Squadron, which had initially been on the left wing on the eastward advance, moved more and more past the I Cruiser Squadron until, echeloned out to the south, it was closest to the II Scouting Group at around 9:40 a.m.

"Nuremberg" gradually sagged astern during the course of the battle and by 10 o'clock was being placed closest to the English battlecruisers, who had reemerged from the haze and fog. Repeated attempts to close in on the other cruisers of II Scouting Group to starboard had to be abandoned because of enemy counteraction. ⁸⁰

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Own fire was frequently interrupted due to changing visibility, but resumed as soon as the enemy could be identified again. In the main "Nuremberg" fired on the rearmost battlecruiser; the light cruisers were not fired on by "Nuremberg". At about 10 o'clock it became a little clearer for "Nürnberg". The fire of the rear battle cruiser immediately increased and remained extremely violent for about 45 minutes with interruptions that were caused by the great distance that had become and the haze. Large and medium-sized projectiles Calibers struck in short succession at close and near distance from the cruiser. Mainly during this time there were losses of personnel and damage to material by explosives. It was a matter of small but sensitive damage to the distance measuring devices and electrical systems; major disruptions to the guns did not occur. 1 man was killed and 4 seriously injured by fragments of grenades that burst outboard, one of whom died after a few hours; and 5 men were slightly injured. Around 10:40 a.m. "Nürnberg" ceased its own fire because the enemy came out of sight in the haze and the enemy fire gradually ceased. "Courageous" and "Glorious" had made a sharp course change to the south at 10:32 a.m., breaking off combat contact with these ships.

After "Pillau" had pushed past her, "Frankfurt" was under well-covering, heavy enemy artillery fire at about 10 o'clock. In the meantime, the battlecruiser "Repulse", which had been detached to support it, had approached starboard astern. At 10.10 a.m. "Frankfurt" had the opportunity to fire a torpedo at a distance of 98 hm; the starboard underwater tube was used to fire at the second enemy cruiser in the visible line, but the torpedo was apparently outmaneuvered by the enemy. At 10:20 a.m., "Frankfurt" received the first hits, which disabled the gun crew of the fourth gun on starboard and a rangefinder. Explosive fragments and the firing of ready ammunition resulted in casualties: 2 dead, 2 missing (ejected overboard), 10 seriously wounded, one of whom died on the same day, and 9 slightly wounded. According to observations on "Frankfurt", the cruiser regularly received heavy fire when its distance from the light cruisers was less than 90 hm; at this distance "Frankfurt" came into the range of the retreating "Repulse", which had intervened at around 10 o'clock with heavy artillery. The commander of the "Frankfurt" therefore tried not to let the distances from the light cruisers drop below 90 hm and to make the enemy's fire more difficult by zigzagging courses. As a result, "Frankfurt" also slowly lagged behind.

The fire from the "Pillau" was frequently interrupted between 9 a.m. and 9.40 a.m. by the heavy smoke and fog. Destroyers standing astern and approaching cruisers were repeatedly fired on at varying distances. At 9.23 a.m. a high flash of flame was observed on one of the destroyers and the sighted destroyers turned away. Between 9 a.m. and 9:30 a.m. there were several heavy impacts in the vicinity of "Pillau". Smoke and fog proved to be excellent means of making fire control more difficult for the enemy.⁸¹

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Page 67 Cruiser battles against English capital ships

Fog buoys thrown between 9:45 a.m. and 10:07 a.m. due to the exhaustion of the fog machines caused a relief, but made effective firing at about 94 hm against a light cruiser impossible. At 10:45 a.m. "Pillau" was port astern of "Königsberg". "Frankfurt" and "Nürnberg" came out of sight from port aft at this time.

At 10:40 cruiser Calypso, tactical number 3 of the forward VI Light Cruiser Squadron, received a very sensitive hit. A shell penetrated the ceiling of the upper command post and detonated inside. All personnel and staff were killed, the cruiser's commander, Captain Edwards, mortally wounded on the bridge. The bridge personnel were largely absent, the ship's command, which was severely limited due to material failures, was transferred to the artillery officer. The hit on "Calypso" is probably the result of fire from "Pillau" or attributed to "Frankfurt".

After opening fire at 9:08 a.m., the "Königsberg" in front could see two destroyers from the enemy forces and three cruisers behind them, deep in the haze, more vaguely than clearly recognizable, two capital ships, which stood out particularly due to the wide, high bow wave. After brief fire against an enemy destroyer at a distance of 150 hm at 9:08 a.m., "Königsberg" switched to targets that were to be identified - small cruisers or one of the battlecruisers. The battlecruisers' turning to the northeast at around 9:30 a.m. was attributed to their own impact. "Königsberg" and her artillery were now transferred to the lead ship of the VI Light Cruiser Squadron, the cruiser "Cardiff". The distance was now about 85 hm. From 9:50 a.m. "Cardiff" received the first hits. A shell hit the forecastle and caused two disturbing fires. Shortly afterwards "Cardiff" was hit in the structure above the rear artillery control post and then again in the torpedo control station. How far "Pillau" or "Frankfurt" are involved in this hit result could not be determined.

At 9:33 a.m. and 9:50 a.m. torpedo shots were fired from "Königsberg" at the foremost light cruiser, distance about 105 hm, without any observed effect. Soon after the torpedo shots, the upper deck torpedo tubes failed due to damage from explosives. At the time of the second torpedo fire at 9:50 a.m., enemy destroyers were observed approaching the II. Reconnaissance Group to launch a torpedo attack. After bearing and distance, the attack was considered rather hopeless; in fact, at 9:52 a torpedo approach was observed 600 m to starboard of "Königsberg".

At 10:12 hrs Konteradmiral von Reuter gave the torpedo boats the order to attack the light cruiser line, which was favorable for torpedo fire. Meanwhile the squad "V 83" (Kapitänleutnant von Keyserlingk, Wedig) and "G 93" (Kapitänleutnant Reimer) led by "V 83" had arrived at the II. Reconnaissance Group. They had been stationed at IV. Barrier breaker Group and at 8.51 hrs received the location of enemy forces incorrectly at a distance of about 80 nm from the Barrier breaker Group. When a radio message at 9:40 a.m. showed that their own forces were only about 20 nm away, the Barrier breaker group was released and ran to meet their own forces with "V 83" and "G 93".

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The boats just managed to get involved in the developing torpedo boat attack led by Korvettenkapitän Cordes of "S 62" (command boat) of the VII flotilla with "G 87", "G 92" and 12th Half-Flotilla with "V 43", "V 44" and "V 45". The own torpedo boats were uncollected in fire lee of the II Scouting Group, ready to attack.

Up to this point, the torpedo boats had repeatedly engaged in artillery battles and participated in the smoke camouflage of their own cruisers. In particular, "G 87", the command boat of the 14th Torpedo Boat Half-Flotilla (Korvettenkapitän Beitzen, Richard), which had already been so energetically involved in the first raid by the minesweeping units, pushed west to the windward fire side of the 2nd Reconnaissance Group right at the start of the battle. When "G 87" (Oberleutnant z. S. Komorowski) observed the first hit on "Pillau" and thought he noticed the cruiser slowing down, the boat stopped abeam of "Pillau" in order to provide help if necessary. The intention of concentrating on the command boat "S 62", standing east of the cruisers port ahead, was put aside in order to carry out an artillery battle between 9 a.m. and 9.25 a.m. with English destroyers, which came up starboard astern to the west. During this battle, "G 87" repeated artillery fire from cruisers from the south-west and destroyer fire from the north. At 9:25 a.m., "G 87" broke through its own line and drove back to fire lee of II Scouting Group to clear the field of fire for its own cruisers. At 9:32 a.m., the Commander-in-Chief of the VII Flotilla (Korvettenkapitän Cordes) attempted to gather the boats scattered around the Leeward Fire by signaling flags and searchlights. "S 62" moderated its speed at times in order to carry out this measure, which was intended to prepare for a closed attack, but had to recognize that with the high marching speed of the entire formation and the lack of excess speed, the gathering the scattered boats was hopeless.

Even before the commander of II Scouting Group gave the order to attack, there was an opportunity for torpedo firing; this was exploited. When the cruisers of II Scouting Group continued to echelon between "Königsberg" and "Frankfurt", when a larger gap developed which enabled them to advance unnoticed and had favorable attack conditions, "G 92" fired a torpedo at 10:10 a.m. at a distance of 90 hm. "V 45" (Kapitänleutnant Lassmann), which had released two torpedoes on the enemy line the first time they met, found the opportunity at 10:01 a.m. and 10:02 a.m. to cut into the line of the light cruisers unnoticed and fire two torpedoes. The distance could not be measured precisely because of lack of vision, it was estimated at 8000 to 9000 m. The boat was under heavy enemy fire. Between 10:15 and 10:45 "V 45" had skirmishes between 50 and 62 hm with an English cruiser and an English destroyer.

After the order to attack was given at 10:12 a.m., "V 43", the command boat of the 12th Half-Flotilla (Korvettenkapitän Lahs), also sailed alone, succeeded in launching two attacks.⁸³

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Relief attacks by the torpedo boats

"V 43" (Oberleutnant z. S. Narses) launched the first attack at 10:33 between "Pillau" and "Frankfurt" on the middle of the enemy line. Two torpedoes were fired from a good position at a range of 70 to 80 hm. At 10.40 a.m. the boat broke through between "Pillau" and "Königsberg" and at 40 hm shot at the tip of the English light cruiser, which was just about to turn to port. Since II Scouting Group was also turning to port, "V 43" found itself alone in the middle between the two lines and, just as the torpedo was fired, was hit by heavy fire from the front of the light English cruisers. Through fog and zigzag courses, "V 43" managed to evade the effect and go leeward of its own line undamaged.

"V 44 (Oberleutnant z. S. Kautter) took part in the cover of the light cruisers and the auxiliary minesweeping half-flotilla, which passed around 10 o'clock, due to the development of smoke and fog. "V 44" had sagged on the port side of the lines between "Pillau" and "Nürnberg" and was at times caught in the impact of long-range shots aimed at the cruisers. At 10.35 a.m. "V 44" had separated to starboard in front of "Frankfurt" and at 10.35 a.m., 10.40 a.m. and 10.46 a.m. fired three torpedoes at 80 hm against the enemy line.

The torpedoes mostly went through in the vicinity of the enemy line and the individual ships. The first torpedo track was "Royalist" (No. 3 of the 1st Light Cruiser Squadron) just ahead ("it passed ahead by a narrow margin") (1) and a short time later another torpedo track observed 30 m in front of "Cardiff" (Flagship of the VI Light Cruiser Squadron). Furthermore, torpedo tracks were repeatedly reported by all English units in the period following the German attack. Hits were not reported on the English side.

"Königsberg" received a lighter caliber hit at 10 a.m., which grazed the shield of the starboard first 15 cm gun, detonated and disabled 14 men. The gun remained undamaged. Two cartridges and ready ammunition burned down. The loss of personnel was 4 dead, 7 seriously and 3 slightly wounded; 4 seriously injured died soon as a result of the wound. This hit did not hinder the combat activity of the ship. At 10.20 a leak, which was probably the result of an underwater short shot, was found in the rear upper bunker, compartment 9.

At about 10:30 a.m. the enemy fire subsided significantly, and the enemy's light cruisers came temporarily out of sight. After a brief lull in the fighting, between 10:45 a.m. and 10:48 a.m., the battle between "Königsberg"/"Pillau" and the cruiser groups resumed for a short time. Heavy artillery fire soon started again from the "Repulse", which was pressing hard after, and which the "Königsberg" tried to avoid with smoke and fog developing.

Konteradmiral von Reuter had not given up the intention of a counterattack against the enemy light cruisers during the battle, which was being conducted on southeastern and easterly courses. However, the repeated use of heavy-caliber fire thwarted his intention. First of all, the unification with the ships of the line "Kaiser" and "Kaiserin" had to be strived for, in order to gain freedom of action against battlecruisers as well.

¹⁾ Newbolt V, p. 174.84

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The attempt to damage the enemy by means of a torpedo attack had been initiated shortly before the arrival of "Kaiser" and "Kaiserin" on the battlefield. The cancellation of the artillery order for the torpedo boats was triggered by the eagerly awaited arrival of the two ships of the line. At 10:25 a.m., "Kaiser" and "Kaiserin" came into sight on "Königsberg".

Admiral Napier on "Courageous" had penetrated a somewhat loosened zone of the fog at around 9 a.m. and was now able to make out the II Scouting Group, which was just turning, first on an easterly and then south-eastern course more clearly. He reported his observation to Admiral Pakenham on Lion, who then ordered the battlecruiser Repulse, Admiral Phillimore's flagship, to advance in support of 1st Light Cruiser Squadron. Admiral Pakenham on "Lion" steered an easterly course with the other battlecruisers of the 1st Battlecruiser Squadron until 9:30 a.m., and followed Detachment of destroyers to recover the "Kehoingen" crew, he turned west with his formation in order to position himself north of the original assembly point in accordance with the operation order.

"Courageous", "Glorious" and the light cruisers had initially advanced in an easterly direction; when the SE course of II. Scouting Group became clearly recognizable, the English formations turned to the south and southeast. The hitherto rather erratic fire of the English heavy and light cruisers soon developed into effective firing soon after 9 a.m.; for the light cruisers, however, it was initially still at the limit of their range; "Ceres" and "Calypso" even arrived 10 minutes later than the other cruisers within range. The destroyers "Vanquisher" and "Valentine", which were with the VI Light Cruiser Squadron, launched a torpedo attack at 9:20 a.m., but it had to be given up under heavy German defensive fire.

The fog developed by the German ships throughout the battle temporarily laid thick walls between the fighting groups. At 09:35 hrs the II Reconnaissance Group was completely out of sight, after a certain interruption in British fire activity had already occurred at 09:20 hrs. Admiral Napier attributed the occasional, more or less accidental reinforcement of the smoke screens to Konteradmirals von Reuter's special tactical intentions and linked them in particular to the mine situation, which was a major concern for him. However, the fog development was only intended to evade the heavy enemy fire and to camouflage the minesweepers passing near the battlefield. The smokescreen that blocked the sight of the German cruisers at 9:35 a.m. put Admiral Napier in a particular embarrassment, since he was now approaching the limit with the battlecruisers moving at 25 nm, up to which he still considered his advance to be safe with regard to mines.⁸⁵

Page 71 The situation on English Side

The bad orientation about the mine situation put a lot of pressure on the decisiveness of this cruiser commander. At the very moment when he was forced to enter the directly endangered area, he assumed that the fog was a measure of particular importance that was intended to make it difficult or impossible for him to follow the courses used by the German cruisers and thus to be recognized as safe. Admiral Napier therefore decided at 9.40 a.m. to turn his formation 90° to port to the northeast, a measure that not only put him in a more unfavorable firing direction towards the enemy, but above all considerably increased his distance from II Scouting Group. It was the time which the I Light Cruiser Squadron had just pushed north behind the VI Light Cruiser Squadron. The battlecruiser "Repulse" was approaching at high speed, but had not yet entered the battle. The VI Light Cruiser Squadron made only a small contribution to the movement to port initiated by Admiral Napier and consequently remained closest to the II Scouting Group. He was followed quite close to port aft by the 1st Light Cruiser Squadron. When the artificial fog cleared a little, the German fire was particularly strong at the head of the VI Light Cruiser Squadron; the described hits on "Cardiff" (1) were the result.

After Admiral Napier had been on a NE course for a few minutes, he reported to Admiral Pakenham that he had lost sight of the German cruisers, but at about 9.50 he sighted the German cruisers lying on a southeasterly course again. He decided to follow them and advance another 12 nm to the border of an area which had been designated as mine-prone in 1915 and regarded by Admiral Napier as an obstacle to any further advance. At 0952, the three English cruiser formations were back on a south-easterly course, resuming fire.

Although Admiral Pakenham on "Lion" had a somewhat better knowledge of the mine situation, it seemed to him that he was concerned about allowing battlecruisers and light cruisers under his command to advance too far into the minefield. He had already warned Admiral Phillimore on "Repulse" against penetrating too far warned that the German cruisers were out of sight, and when Admiral Napier reported that the German cruisers had gone out of sight, he thought it was time to break off the pursuit. He therefore ordered all formations to gather at the general meeting point. This order, which was based on little knowledge of the enemy's circumstances, did not take into account the constantly changing view and the changing prospects and prospects of the enemy. It was received by the English ships standing by the enemy at about 10 o'clock at a very undesirable time for them. "Repulse" had just entered the battle and all the ships were again in lively fire activity It is understandable that Admiral Napier was reluctant to obey the order; he decided to continue the advance for the time being. At the moment he had the unfounded impression that the light cruisers could not do without the support of the battlecruisers because the German ships had meanwhile been reinforced.

1) See page	67 f. ⁸⁶
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He reported his impressions: In addition to the previous enemy forces, he had seen smoke plumes from six other ships and was about to engage in battle. The actual support from "Courageous" and "Glorious" was quite low at this point due to course changes and not using their maximum speed. Between 10:07 a.m. and 10:15 a.m. they had to stop firing, their firing had reached the range of the guns. The artillery fire was now maintained by the heavy artillery of the "Repulse", the 15 cm guns of the VI Light Cruiser Squadron and the "Caledon", the lighter guns of the other cruisers were no longer effective at long ranges.

Around 10.30 a.m. the fog from the German ships increased again. Simultaneously with the attack of the German torpedo boats, a submarine attack on the starboard side of "Repulse" was mistakenly observed by English destroyers. Light cruiser squadrons stood close to "Repulse".

At 10:32 a.m. Admiral Napier had finally reached the limit of the area to which he believed he could be responsible for the advance of his battlecruisers. He now turned sharply to starboard with the battlecruisers "Courageous" and "Glorious" far behind the I and VI Light Cruiser Squadrons and set his course outside and along the mine zone he suspected. The two battlecruisers, which had been the most dangerous opponents of II Scouting Group based on their initial position, their high speed and their artillery strength, were eliminated from the battle at this point. Apart from that, Admiral Napier had only felt compelled to hold back the "Repulse", which was about 5 nm starboard ahead of him, and to recommend caution to the light cruiser squadrons as they continued to advance and to ask them whether there was a chance of a successful conclusion to the battle.

The light cruisers felt no reason to break off the battle; their imperfect mine map and ignorance of the supposed mine danger zone made them impartial and bolder than the heavy ships. The question of a successful conclusion of the battle was answered by the events themselves soon after the two battlecruisers "Courageous" and "Glorious" left the battle: shortly before 10:50 a.m., heavy shells hit the vicinity of the English cruisers.

The pair of the liners "Kaiserin" (Kapitän z. S. Graßhoff) and "Kaiser" (Kapitän z. S. Loesch) was determined by the head of the IV Squadron (Vizeadmiral Souchon) to serve as a backup for the raiding group. Kapitän z. S. Graßhoff, who as the senior commander was in charge of the pair of the battleships, reported to the commander of IV Squadron at 4 p.m. on November 16 that he intended to be west of Heligoland on November 17 at 7 a.m.⁸⁷

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Heavy naval support

Vizeadmiral Souchon rightly considered this very rearward position to be quite a distance from the initial position of the light force, but did not intervene, the commander of II Scouting Group, to whom the initial position had also been reported, not having raised any objections. Kapitän z. S. Graßhoff had decided to start at this point in the rear because he considered it doubtful whether the return group would return the same way through the middle of the German Bight or whether it would come in to the north-east on Route Blue. He therefore intended to continue towards the starting point of the raid (point 5) until around 10:30 a.m., because according to his calculations the northernmost point of the raid would then be reached and it would then have to be decided how the return march would be carried out. The liner meeting would then still have it in their hands to advance further on the middle path or in the direction of the Blue Route. These doubts about the return route of the Raiding Group were also shared by the commander of IV Squadron, for certain preparations by the leader of II Scouting Group for the arrival indicated that he might possibly return on Route Blue.

At 8:30 a.m. the radio message from the II Scouting Group came in on "Kaiserin": "Enemy forces in square 058 alpha." The battleship meeting with "S 24" (Kapitänleutnant z. D. Paschen) and "S 18" (Kapitänleutnant Wildemann) as U-boat backup was at this time still near its 7 o'clock position west of Helgoland, because contrary to the original intention to follow the dead end towards point 5, "Kaiserin" and "Kaiser" had stood up and down west of Heligoland in order to stand equally well from this central position for the middle path or the Blue Route. The square transmitted by the leader of the II Scout group caused Kapitän z. S. Graßhoff to have justified doubts as to the correctness of the transmission; this delayed the measures to be initiated more quickly. An F. T. message from the "Königsberg" arriving at 9:06 a.m. did not yet bring complete clarity about the battlefield, but it did indicate that the direction of the battle was developing on the way from the center into the German Bight. "Kaiserin" and "Kaiser" had taken a north-westerly course, initially at a speed of 15 nm, at 9:06 a.m. at 18 nm with the intention of increasing the speed as soon as the engines were able to do so. Another report from the II. Scouting Group at 9:25 a.m. now gave the correct location. "Kaiserin" and "Kaiser" went to 19 knots at 9:48 and soon afterwards to 20 and 21 nm. Kapitän z. S. Graßhoff reported the location, course and journey to the leader of the II reconnaissance group. As things were, it was to be expected that the battleship meeting would be able to intervene in about an hour. The choice of a rearward starting position by the commander of the liner meeting and avoidable delays in the extremely urgent advance after receiving the enemy report made the timely arrival of the liners ordered to cover the light forces under unfavorable conditions from the outset.

At 10:09 a.m., the leader of II Scouting Group radioed: "Location square 098 *beta* Z. 7 1.0; Enemy is standing square 082 *beta*." **

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Kapitän z. S. Graßhoff concluded from this radio message that the battleships would come between friend and foe between the enemy and II Scouting Group if the course continued; II Scouting Group had to be in sight on the starboard side, with the enemy ahead on the port side. Heavy cannon fire soon made it certain that the collision was imminent; the groups had to come into sight of each other in a few minutes with visibility estimated at 150 hm.

Kapitän z. S. Graßhoff was only informed in general terms about the nature and composition of the enemy through the repeated radio messages from the leader of the II Scouting Group that he was engaged in combat with heavy enemy naval forces. He concluded from the development of the situation on battlecruisers or fast ships of the line and assumed a considerably superior speed compared to the battleships of the line. He reckoned with the enemy's habit of always appearing in squadrons and protected by a main body standing behind, and prepared himself from the outset for a considerable enemy superiority. Caution seemed to be required in order not to get into a confusing and tactically fatal situation given the close mutual approach and the poor visibility. His decision was to cover the II. Scouting Group by a retreating battle of the battleships; the direction of the battle was determined by the width of the mine-free path, the extension of which to the outside was unknown to the commander of the battleship meeting on November 17th through search work, just as little was known of any new contamination by the reported English association. The supposed superiority of the faster opponent put the timely recording of the turn up in the foreground of the meeting leader's considerations, who wanted to remain in control of his decisions. The uncertainty of the mine situation weighed on the decisiveness in the face of a follow-up through the minefree strip.

At 10:20 a.m. the first two barrier vessels on a SE course to the right came into sight to the north-west. There was a lot of smoke to starboard ahead, then flashes of gunfire and very soon impacts. It was not immediately clear whether friend or foe. Shortly thereafter, shots also flashed on the port side ahead; this was probably the enemy. Gradually the outlines of many torpedo boats with Standard "Z vor" and some cruisers became clearer on starboard ahead. The situation developed exactly as was to be expected from the previous reports from the leader of II Scouting Group. At first, Kapitän z. S. Graßhoff was unable to form an impression of the condition of the II. Scouting Group, whether there were casualties or battle damage.

The groups quickly approached each other on opposite courses. At 10.27 a.m. Kapitän z. S. Graßhoff considered it appropriate to turn the encounter to starboard on the opposite course and to slow down the voyage, so as not to take the expected heavy fire from the enemy steaming towards the ships of the line at full speed during the turn. ⁸⁹

Page 75 The intervention of the ships of the line

Shortly after turning to the south-east, the high bow waves of about four ships - it was Admiral Alexander-Sinclair's formation (VI Light Cruiser Squadron) - became visible without the type being able to be identified. Gradually individual ships became recognizable; at least four units were counted heading towards the battleship meeting in a blunt echelon. There seemed to be large ships with a long bow and a sheer in the deck, one of which was definitely found to have a tripod mast. When the commander of the "Kaiserin" spotted the enemy himself and saw three-legged masts near him, he had not the slightest doubt that he was dealing with battlecruisers. It was not known that the English had built light cruisers with three-legged masts during the war.

On the cruisers of II Scouting Group, the intervention of the ships of the line in the battle, which had been fought against strong superiority, had been eagerly awaited. After the II. Scouting Group had withstood the superior fire of medium and heavy artillery at distances of between 100 and 124 hm for almost two hours, after the enemy had followed his fast ships so far into the inner German Bight, Konteradmiral von Reuter now wanted to start the counterattack and achieve the tangible success of the day. Konteradmiral von Reuter explained in his battle report: "Up until then, the battle had been carried out with a calm that can probably be called exemplary. Every man at his post, carrying out his assigned function as if at an exercise. Despite powerful impressions, such as the covering salvos from the heaviest artillery and the effects of enemy fire, and despite the fact that it was only a matter of time before the light cruisers would be at the mercy of the enemy, I was aware that a battle-hardened troops faced all this with equanimity and braved the dangers with cool blood, inspired only by the ardent desire, filled only with the thought of preparing the enemy's ruin himself. That time had come, calm gave way to a certain feverish expectation, and it could only be a matter of minutes before the enemy's fate overtook them."

Konteradmiral von Reuter intended "to pull the enemy behind him on an easterly course through the English and German minefields and thus get him between the light cruisers and ships of the line. To the north and north-west he could only dodge over the mine barricades; if he chose this movement to retreating to the west he was likely to suffer mine casualties. The retreat to the west, on the other hand, had to lead him towards the ships of the line" if - so was the opinion of the leader of the II Scouting Group - it was possible to convey to the ships of the line their own intention - to hold the course NW. It turned out, however, that the difficulties of uniting the two groups marching in opposite directions—II Scouting Group and Battleships Meeting—in a unified combat action at the very moment when the Battleships Meeting could not yet have a clear overview of the battle situation were greater than Rear Admiral von Reuter accepted. The turn of the battleships to the south-east had already thwarted Rear Admiral von Reuter's intention before "Kaiserin" and "Kaiser" had made contact with II Scouting Group.

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The signals apparatus began to work intensively with the sighting of II Scouting Group and battleship meetings on both sides. The ship of the line "Kaiserin", which was only trained in a squadron formation, was not fully up to the task of signaling - organizationally and personnel - to intervene in the battle situation analogously and according to the commands now given by the leader of the II Scouting Group. Optical signals between "Königsberg" and "Kaiserin" crossed; they reached the commanding posts only in part and belatedly. Kapitän z. S. Graßhoff was under the impression that he was left without orders and information from the leader of II Scouting Group and only received communications from the commander of the "Königsberg"; on "Kaiserin" one thought at times of the possibility that the leader of II Scouting Group had failed. This unique combat situation could only be mastered through independent action with the sole aim of destroying the enemy. Optical signals and radiotelegraphy had to come too late in the rapid development of combat action, even with better working and well-coordinated signaling.

While II Scouting Group steered easterly and south-easterly courses as intended by Konteradmirals von Reuter, the battleship gradually turned to port, between 10:41 a.m. and 10:55 a.m. steered easterly courses and reduced speed to slow speed in order to let the enemy run and get in direct contact with II Scouting Group. The leader of the II Scouting Group had hoped that "Kaiserin" and "Kaiser" would hold out on a northwesterly course of their own accord and that the development he had in mind would take place without his intervention. However, the sooner the ships of the line advanced with heavy artillery against the English light cruisers, the sooner it became likely that they would turn and sail to the north-west. In terms of the operational intention of the leader of the II Scouting Group, to pull the enemy forces as far east as possible and to have them block their way back through the two ships of the line during this pursuit, a hesitant approach by the ships of the line and opening fire as late as possible could only be beneficial. In fact, the English cruisers gave up contact with II Scouting Group the moment the ships of the line began firing against them.

More understandable than all the considerations of the battle reports, some of which were written later, was the desire of the light cruisers that the ships of the line intervene in the battle as quickly as possible and relieve them of the immediate tactical pressure. It was quite disappointing for the light cruisers that after the battleships had arrived they were still under heavy enemy fire, and the commander of II Scouting Group had no choice, and that was the most natural thing to do, than to seek contact with the ships of the line in a southerly direction as quickly as possible.

At 10:41 a.m. the "Kaiserin" lying on E by S opened fire on the weakly discernible English light cruisers without reliably measuring the distance to 160 min, in order to initially take the enemy fire at all. 91

Page 77 Hesitant behavior of the liner - meeting

Impacts of the first salvos were not observed, the distance was much smaller than assumed. The next volleys were good between 135 and 120 hm. The fire had to be interrupted for a short time as the enemy maneuvered and came out of sight. When fire resumed, the enemy appeared to be on a north-easterly course. The eighth salvo of "Kaiserin" scored a hit in the waterline on the flagship of the 1st Light Cruiser Squadron "Caledon" without causing serious damage. The battleship "Kaiser" was only able to spot the enemy at 10:55 a.m. and fired briefly on it. Immediately afterwards the English withdrew from the battle.

It was the vanguard of the 1st Light Cruiser Squadron that had been fired upon by "Kaiserin" and "Kaiser". This formation was the VI. Light cruiser squadrons a little north and a little back. The two German ships-of-the-line were spotted on the enemy's ships at the moment when the first heavy shells fell all around the English light cruisers. Immediately, Admiral Aleiander-Sinclair ordered the two light cruiser formations to turn back. The turning of the English cruisers to port to NW was observed at the Battle of the Lines and II Scouting Group. The enemy stopped firing and immediately came out of sight.

Although the enemy light cruisers had ceased their gunfire, it was noted on "Kaiserin" that further heavy impacts hit the II. Scouting Group and the torpedo boats. Kapitän z. S. Graßhoff therefore approached the II Scouting Group at top speed in order to relieve them of the enemy who was not visible to "Kaiserin"; the "Repulse" further to the west could not be made out. The commander of II Scouting Group, on the other hand, tried again and again, using every means of signaling, to give the battleships the order to go on a north-west course. When Konteradmiral von Reuter finally realized that his efforts were unsuccessful, he gave up the initial plan and decided to turn north-west with "Königsberg", which was on a SSE course, and to attach himself to the enemy forces. He hoped that this maneuver and the signal command "Follow the Leader" would pull the meeting of the battleships north-west with him. At 10:58 a.m., as "Königsberg" was about to initiate this movement, the cruiser received a heavy hit from the stern in the longitudinal direction of the ship. The projectile penetrated the funnels and shattered in the starboard upper bunker above the fourth boiler room. All three funnels were badly damaged, the chimney of the starboard sixth oil boiler was destroyed; the result was a bunker fire that enveloped the entire ship in smoke. The speed gradually dropped to 17 nm. Heavy smoke formation on the upper deck obstructed the view and the operation of the guns. The ship was only partially operational, but was still firing from the rear guns until the enemy came into view at 11:04. Under these circumstances the leader of the II Scouting Group had to give up his intention of pushing after the enemy. He gave all armed forces through F.T. and optically the command to go on course SSE. Immediately after the hit on "Koenigsberg" the enemy fire stopped as if with one blow. 92

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The order given by Admiral Aleiander-Sinclair shortly before 11 a.m. to turn around was received by "Repulse" with a slight delay, so that this most dangerous opponent was the last to set a north-westerly course after 11 a.m. "Repulse" had thus advanced furthest to the south-east and formed in this way the rear cover of the marching cruiser groups. With one of the last salvos of the battle, "Repulse" scored a heavy hit on "Königsberg".

Admiral Napier, who was still pacing at the border of the supposed danger zone north-south and waiting for an answer about the status of the battle, received the report at 11 o'clock from "Galatea" (1st Light Cruiser Squadron) that enemy Ships-of-the-line, battlecruisers and light cruisers were stationed to the south-east and steering an easterly course. So for the moment there was no reason for serious concern about the situation with the following English cruisers. From 11:40 a.m. dense fog covered the English retreat. The union of the NW course Forces returning from the German Bight with those of Admiral Napier was established shortly after 2 p.m.

Konteradmiral von Reuter had concluded from the sudden cessation of enemy gunfire that the enemy had turned around with all their forces at 11:25 a.m. he gave the order to "Kaiserin" to "feel north-west". He made the cruisers "Nürnberg", "Frankfurt" and the torpedo boats available to the leader of the battleship meeting and wanted to switch to "Pillau" himself. The Battle of the Line had hitherto steered southeast, assuming that the superior enemy was still on their heels and, at their higher speed, would steam up to port from the smoke wall and II Scouting Group to get a forward position clear of smoke. In this situation, at 11:35 a.m., Kapitän z. S. Graßhoff finally received the optical order from "Königsberg" to "feel to the north-west". Until now he had not thought he had received any orders from the leader of II Scouting Group, and from the first order he received from the leader of II Scouting Group he recognized that the enemy had turned back. Kapitän z. S. Graßhoff turned around with both ships of the line, but then immediately turned back to a south-easterly course when "Kaiser" reported: "Cruiser in NNE." As soon became apparent, this report was outdated and incorrect. At 12:01 p.m., the meeting of the liners turned to a NW course.

In the meantime, at 11.35 a.m. SSE, the flagship of the I. F.d.T., cruiser "Stralsund", came into sight. This too received the order from the leader of II Scouting Group to feel out to the north-west. "Stralsund" with the torpedo boats standing near her joined the ships of the line. Because of the bad weather, Konteradmiral von Reuter did not want to pursue the enemy at full speed, since contamination by mines had to be expected. At 12 o'clock he boarded "Pillau" himself and followed at high speed to the north-west. "Königsberg", which had received the order to follow if the ship could run 24 nm without significant development of smoke, turned to NW at 12.26 p.m. and rejoined "Pillau" at 1:05 p.m.⁹³

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Termination of the battle

"Stralsund" with the I. F d. T., Kommodore Heinrich, on board as well as "S 42" and "G 94" had in the night from November 16th to November 17th and in the morning of November 17th in the area of Borkum-Reef lightship to pick up the II Torpedo Boat Flotilla (4 boats) returning from the advance from the Hoofden. The merger with II Flotilla was at 8:15 am on November 17th. At 8:50 a.m., when the formation was about 20 nm east of Borkum on the return march to the Jade, the radio message from the leader of II Scouting Group about "sighting of enemy forces in 058 alpha" arrived at the I. F.d.T. The incorrectly coded square specification (058 alpha instead of 058 beta) (1) caused the I. F.d.T. assume that the II Scouting Group was not in combat contact with the reported enemy, but that the enemy might have been spotted by aircraft reconnaissance. He therefore decided to initially only head for the yellow route at 21 nm and soon thereafter at 24 nm, to leave the German Bight and, if necessary, to damage the reported heavy enemy forces in a night advance. The other reports from which the I. F.d.T. was able to follow the course of the battle and recognize the inaccuracy of the first reported location, changed his mind. From 9:30 a.m., at high speed, bypassing the German mine barriers to the south and east, Platz 10 was approached south-west of Helgoland in order to either connect up with the incoming forces of II Scouting Group that were engaged in combat or to connect with forces that were meanwhile leaving Hade. At 9.50 a.m. the commander of IV Squadron received the FT order that "Stralsund" should go to II Scouting Group with II T. Flotilla. At 11.25 a.m. the high bow water of two groups of ships in sight. There was no answer to repeated recognition signal calls, so that Kommodore Heinrich decided to slow down and turn to an easterly course. When the recognition signal was now answered, the western group could be recognized as "Kaiserin" and "Kaiser", the eastern group as "Königsberg" and "Pillau". The "Stralsund" group went back on course NW and high speed. The connection to the liner meeting took place at 11.37 a.m., just as it turned to NW for the first time. Shortly after 12 o'clock, after "Stralsund" with the liners for the second time on a northerly course turned, seemed to the I. F.d.T. Now it is of the utmost importance to determine whether there are enemy forces to the north that could pose a threat to our own forces advancing to the north-west in the rear. He therefore ordered the II Flotilla to advance in that direction. The desire for clarification was particularly aroused by the fact that ships had been seen in the haze from the bridge "Stralsund" in NNE in the haze, which, as it turned out later, had been "Frankfurt" and "Nuremberg".

At 11:40 a.m. "Graudenz", which had just set sail in the morning to relieve picket duty, had attached itself to "Stralsund" with II. F.d.T., Kommodore Eberius, on board.

1) See Page 73. ⁹⁴	
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3. The activity of the High Seas Fleet until the end of 1917

Outpost service had run out, with the II. F.d.T., Kommodore Eberius, attached to "Stralsund" on board.

The 2nd Torpedo Boat Half-Flotilla (Kapitänleutnant Paul, Oswald) was meanwhile furthest to the north-west. This half-flotilla and "G 193" (Oberleutnant z. S. Hoffmann, Martin) had been in List on the morning of November 17, had set sail at 7:30 a.m. for the return trip to Wilhelmshaven and had been prompted to do so by the enemy report from the leader of the II Scouting Group to go on a westerly course and at high speed in order to catch up with the battle. As the reports progressed, the 2nd Torpedo Boat Half-Flotilla attempted to catch up with the outgoing liner meeting "Kaiserin" and "Kaiser"; at 10:50 a.m., heading west, she sighted "Nuremberg" and "Frankfurt" heading east at full speed. On optical inquiry from the cruisers, the half-flotilla commander learned that the enemy was in the west, although he was unseen. Scattered boats of the 6th Minesweeping Half-Flotilla came into sight to the north and disappeared in a northeasterly direction. To get sight of the enemy, they steered west first, then NW by W. At 11:35 the 6th Minesweeping Half-Flotilla on the opposite course and informed the half-flotilla commander on request that the enemy had last been sighted at 10:15 a.m. and had apparently withdrawn because the gunfire had become weaker and weaker. The 2nd Torpedo Boat Half-Flotilla advanced to 098 beta and gave its position to "Kaiserin" at 12:15 p.m. Since the enemy had not yet been sighted and radio messages seemed to indicate that the battle had moved to the southeast, the 2nd Torpedo Boat Half-Flotilla went on a SE by E course at 12:05 p.m.. An attempt to get in touch with the formation based on a later location report from "Kaiserin" was unsuccessful, probably as a result of poor visibility and differences in position. The 2nd Torpedo Boat Half-Flotilla turned back at 1 p.m. on radio orders from the II Scouiting Group to come in.

Immediately after the arrival of the first report from II Scouting Group about the sighted enemy, the outpost commander, Vizeadmiral Souchon, gave orders to all outpost forces to set out at speed. At 9:40 a.m., the first to sail were the battlecruisers "Hindenburg" (Kapitän z. S. von Karpf) and "Moltke" (Kapitän z. S. Gygas); they sought to connect up with the naval forces engaged in combat at high speed. At 11.50 a.m. the battlecruisers encountered the "Königsberg", which, when asked, replied that the exact number of enemy ships had not been determined because of the hazy weather, but that there were several 38 cm large cruisers among them. At 12.10 p.m. the "Kaiser" and "Kaiserin", cruisers and torpedo boats came into sight right ahead. By order of the leader of II Scouting Group, the battlecruisers attached themselves to the ships of the line.

The two battleships "Friedrich der Große" and "König Albert" had set sail at 10 a.m. and at 1:40 p.m. met the battleships, battlecruisers and cruisers commanded by the leader of II Scouting Group. At 1:30 p.m. they had turned back to the SE after reliable reports had been received about the whereabouts of all minesweeping units.⁹⁵

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Page 81 Inconclusive reconnaissance to Northwest

All formations had reported in full, the reconnaissance of the torpedo boats to the north had brought nothing, and running too far to the north-west was not advisable because of the danger of mines. At 1:45 p.m., the command was handed over to the commander of the outpost forces, who arrived at "Friedrich der Große", who decided to change the formation again to a NW course and, as long as it was light, to stand as far out to sea as possible to be able to cover the torpedo boats deployed for reconnaissance if necessary. In the meantime, parts of the Z Flotilla Flanders (1) from Helgoland and the 1st Torpedo Boat Semi Flotilla from Borkum had set sail and had joined forces with "Friedrich der Große", "König Albert", "Hindenburg" and "Moltke" for submarine security. At 3 p.m., the formation finally turned around to avoid an area suspected of being mines.

Shortly after 2 p.m., the Chief of the Outpost Forces had sent the I. F.d.T. requests, if at all possible, to use torpedo boats against the retreating enemy. From more detailed information, which he only received at about 2 p.m., the latter had formed the picture that contact with the battlefield had been lost since about 11 a.m. and that the enemy had been marching out of the German Bight since that time; the enemy must therefore have a lead of 50 to 60 nm, and it seemed hopeless to catch up with him. It was not known whether there were damaged, slowly marching ships on the enemy. Despite these slim prospects, the I. F.d.T. to take advantage of any chance opportunities that came up and to order a torpedo boat advance in a north-westerly direction for the following night, during which, however, the enemy was no longer seen. It only led to the bringing in of the Dutch sailing vessel "Drensckog" by "V 45" (Kapitänleutnant Lassmann); the statements of the Dutch crew confirmed the battle damage of some English ships.

The aerial reconnaissance, which was aborted on the morning of November 17 due to lack of sight, was resumed after the first enemy reports despite the poor visibility. Between 9:30 a.m. and 5:45 p.m., nine aircraft took off from Helgoland, six aircraft from Borkum—apart from one combat squadron, which was assigned to the west instead of north-east because of an incorrect square indication—and ten aircraft from Norderney. On the orders of the commander of the airships, "L 41" (Hauptmann Manger) rose at 11:32 a.m. and "L 47" (Kapitänleutnant von Freudenreich) at 11:43 a.m. The airships, which advanced with this great delay, pushed north-west of Heligoland and broke off the reconnaissance at about 4 p.m. because of the low cloud cover without having sighted anything of the enemy.

The activity of the Helgoland seaplane station was important for aircraft. At 10:40 a.m., aircraft "868" (pilot, Vizeflugmeister Esser, observer, Flugmaat Ehrhardt) sighted the II Scouting Group fighting enemy naval forces. The enemy course was incorrectly determined to be NW instead of SE and some of the light cruisers were mistaken for armored cruisers.

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The plane correctly recognized its task and pushed north to reconnaissance behind the enemy. Northwest of the fighting groups, as reported by the aircraft, 8 ships of the line, presumably of the Iron Duke class and 8 to 10 large destroyers, were found heading NW and southwest of them 6 armored cruisers, also heading NW. The aircraft might have encountered the 1st Battle Squadron and the 1st Battlecruiser Squadron and in this case correctly identified the ship types, although not exactly numerically. It tried to place six 5 kg bombs on the last ship at an altitude of about 600 m and thought it had observed a hit on the stern. Observation was difficult because the target was obscured by low clouds. After the bombing, reconnaissance was canceled due to poor visibility. The expedient action taken by this aircraft had led to factually important findings, which, however, could only be reported after landing at 1:10 p.m. and were therefore worthless.

At 10:30 a.m., aircraft "1290" (pilot Flugmaat Jung, observer Vizeflugmeister d. R. Berger) observed the battle of the II Scouting Group and mistook the light cruisers of the VI light cruiser squadron for armored cruisers. The aircraft was unsuccessfully fired at by shrapnel as the destroyers approached, and at 10:40 a.m. it observed the hit on "Calypso".

At 10:30 a.m., aircraft "1297" (pilot, Vizeflugmeister Blinzler, observer, Lieutenant z. S. Löhner) sighted the cruisers in the battle, confused light enemy cruisers with armored cruisers, estimated the battle course SW instead of SE and was also unsuccessfully fired upon by destroyers when approaching. When the enemy turned around, aircraft "1297" tried to follow the enemy running off to the NW when a cloud bank at an altitude of about 400 to 600 m and an estimated length of about 40 nm pushed in between. An attempt to break through failed because visibility under the clouds was only 1 nm. The aircraft continued to fly to the NW and through a gap in the clouds saw three enemy destroyers, one of which it observed was being towed. Eventually, a line of 6 to 8 large ships, estimated as such from the clouds of smoke, could be made out in a north-westerly direction. It was probably the ships of the line of the 1st English battle squadron. More details could not be ascertained because the return flight was necessary for fuel reasons. The attempt by the aircraft "1297", which was equipped with F.T., to get through reports about sighted ships of the line, was unsuccessful.

At 10:15 a.m., aircraft "1095" (pilot, Flugzeugobermatrose Schröder, observer, Flugmaat Leitz) sighted the fighting formations and at 11:25 a.m. a formation of 6 large ships with 10 light cruisers steering north and north-west the destroyers of the submarine security. Due to the high speed of the ships and because of headwinds, the aircraft could only come close when the last ship disappeared under a cloud cover located at a height of 80 to 100 m. The result of dropping two bombs on a ship just visible through a mast and three funnels could not be observed.⁹⁷

Page 83 Reflection on the events of November 17, 1917

The aircraft "808" (pilot Flugmaat Fahrian, observer Flugmaat Beulke) and "1100" (pilot Flugobermaat Mierke, observer Lieutenant z. S. Kessler) also spotted the fighting forces, with "808" confusing a group of light cruisers with armored cruisers. "1100" saw six thick clouds of smoke at 12:40 p.m., from which it concluded that there were large ships.

Despite the hazy weather, the aircraft mentioned had gained more or less important insights into the enemy's situation, which, however, could not be evaluated due to the poor communications link. The difficulty in distinguishing ship types became apparent. On landing, aircraft "1530", which had taken off from Borkum at 12:30 p.m. for reconnaissance purposes, was lost. The pilot, Flugmaat Sander, drowned, and the observer, Ensign z. S. Schily, was rescued.

An order of B.d.U. on the morning of November 17th, that the operational U-boats were to advance towards the "Middle" route, resulted in "U 53" (Kapitänleutnant Rose) leaving Heligoland at 11 a.m., at 12:30 p.m. the connection to the liner group "Friedrich der Große" and "König Albert" arrived and at 3.15 p.m. started the return march together with them.

The events of November 17, 1917 had clearly shown how vulnerable minesweepers in the outskirts of the German Bight were to raids by superior English naval forces that were possible at any time. When enemy capital ships appeared, minesweeper formations that were only directly protected by small cruisers were in a situation that should have led to the annihilation of the cruisers and minesweeper formations; the battleships "Kaiserin" and "Kaiser", which were far behind, had to come too late if the enemy behaved energetically. In reality, however, the events of November 17, 1917, had taken a very different course. The bold advance of the senior cruiser commander, located in the immediate vicinity of the small units, Kapitän z. S. Hildebrand, against the suddenly superior enemy, it was possible for the minesweepers to detach themselves from the enemy except for the anchored outpost steamer "Kehdingen" and escape unscathed far superior English opponent the prerequisites for this unexpected result. The brave action of the three torpedo boats "G 87" (Oberleutnant z. S. Komorowski), "G 92" (Kapitänleutnant Arthur von Killinger) and "V 45" (Kapitänleutnant Lassmann), which deployed independently for immediate protection, was enough to defeat the numerous fast and to keep a powerful English destroyer from thrusting into the smokescreen, and that in visibility conditions favorable to the enemy. Even if the English destroyers acted ruthlessly on their own initiative in this situation, English restraint had all the more serious consequences, when none of the English leaders had given orders to cruisers or torpedo boats to pursue and destroy the German minesweepers, who were actually the aim of this advance, either before or after they encountered the enemy. 98

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The fate of II Scouting Group (Konteradmiral von Reuter) would also have been sealed if the two battlecruisers "Courageous" and "Glorious", which were the first to encounter the German cruisers, exploited their superior speed and stayed close to II Scouting Group. The group of submarines erroneously sighted by "Courageous" in the middle of the German armed forces can hardly be an explanation for the fact that everything was not done from the outset to destroy the small cruisers, given the presence of four destroyers for the immediate protection of the 1st English cruiser squadron. The English naval history sees a certain exoneration for Admiral Napier's hesitant behavior in the inadequate knowledge of the number and composition of the German armed forces. For his release of the German cruisers between 8:30 and 9 o'clock he claims that the German cruisers, which were completely camouflaged by fog, were on a westerly or north-westerly course according to his impression at the time - which was correct, by the way. He would therefore have had to steer a northerly course with the 1st Cruiser Squadron for a short time in order to prevent the enemy from breaking through to the north. In fact, "Nuremberg", "Pillau" and "Frankfurt" at hers first thrust between 8:46 and 8:55 steered courses between 347° and 270°. It was not until 9 o'clock that Admiral Napier was certain that the German enemy was retreating on a south-east course. The English account expressly states that "Courageous" and "Glorious" never ran more than 25 nm until 9:40 a.m. when the pursuit was called off. According to Admiral Napier, further pursuit was extremely difficult due to the mine situation. In contrast, the English naval history correctly states that a vigorous pursuit of Admiral von Reuter by "Courageous" and "Glorious" was not due to further reconnaissance reports and explains: "The enemy was in sight and retreating in front of Admiral Napier. Wherever the enemy was going, one could follow and retreat with sufficient certainty when encountering superior forces. At the time Admiral Napier was superior, and his gunners kept their aim fixed: why did he choose to follow the enemy at 25 nm instead of close at 30 nm? Was this an erroneous judgement, a failure to perceive his superiority, or was he influenced by some other consideration of which nothing is known? The question has not been asked and probably cannot be answered now; however, it is a matter of continuing interest, and its proper answer would have contributed to an instructive experience (1)."

There is no doubt that the improper and varied information given to the English unit leaders involved about the mine situation in the German Bight was a heavy burden that put pressure on their willingness to make decisions. Only with the leaders of the I. and VI. Light Cruiser Squadron's reckless attitude left nothing to be desired; they were the least concerned with mine concerns, as their mine maps were the most incomplete and the large mine-prone area west of List was uncharted, unlike the maps of Admirals Pakenham and Napier.

Page 85 Considerations

But the decision of the day depended less on the leaders of the light cruisers than on those of the capital ship formations.

After securing the minesweepers entrusted to his protection, Konteradmiral von Reuter had led the II Scouting Group with the assigned torpedo boats back in the direction of the ships-of-the-line, which were setting sail for relief, making skillful use of all tactical advantages. The fight with the two light cruiser formations that were pressing after them and were superior in number and armament, which were supported during the main period of the battle by the battlecruisers "Courageous" and "Glorious" and later by "Repulse", had been hot and stubborn. The turn of events anticipated with the arrival of the ships-of-the-line on the scene of battle came about in that the superior combat capability of the battlecruiser Repulse and the I and VI light cruiser squadrons were immediately brought to a halt. When the first heavy shells hit, the English formations immediately retreated; Admiral Napier with "Courageous" and "Glorious" had just left the battle for other reasons. The intervention of the "Kaiserin" and "Kaiser" meeting had brought the urgently needed relief to the II Scouting Group: The immediate endangerment of "Konigsberg" and "Pillau" ceased, "Nuremberg" and "Frankfurt" were freed from a critical situation. However, the possibility of a decisive turn in favor of the German arms had not been exploited.

The strongly rearward, through the employed considerations of the Kapitäns z. S. Graßhoff's not fully justified establishment of the "Kaiserin" / "Kaiser" meeting, the approval of this failed initial position by the Outpost Chief and the delay in the advance before and after receipt of the first enemy report had led to the light armed forces that had been pushed far forward taking the full force of the enemy attack had to endure alone for too long. Less exhaustive reporting and issuing of orders by the leader of II Scouting Group to the liner group contributed to the fact that Kapitäns z. S. Graßhoff, who, like the commander of the 1st English cruiser squadron, was feeling insecure, approached the battlefield under a false assessment of the situation. The messages he received did not give a clear picture. FT messages received at 8:55, 9:08 and 9:25 had spoken of withdrawal of II Scouting Group in front of heavy forces; the reports had given rise to the image of an enemy formation with numerous heavy capital ships, which even the battleships would not be able to cope with if a battle were to break through. Kapitäns z. S. Grasshoff saw his task in relieving the II Scouting Group as quickly as possible by covering the joint retreat. The idea of maintaining a north-west course, bringing "Kaiserin" and "Kaiser" as close as possible to the advancing enemy and only opening fire at an effective combat distance, so as not to cause the enemy to break off the battle early, could not, given this view, situation not come. His decision-making was influenced by the responsibility for the battle of the line against an opponent thought to be greatly superior, as well as by the urge to relieve II Scouting Group. 100

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He wanted to use the heavy artillery of his strong ships-of-the-line as soon as possible against the enemy besieging II Scouting Group, but at the same time join the ships-of-the-line in the retreat deemed necessary. This assessment of the situation rightly placed the relief of the light cruisers in the foreground, but ignored the possibility of a great success through an attacking approach. A vigorous thrust to the north-west and a delay in opening fire would have left this possibility open, but the two cruisers of II Scouting Group that were under heavy enemy fire would have been relieved later. Kapitän z. S. Graßhoff used the ships of the line as he had done based on the reports actually presented to him. The cloudy weather made it difficult for him and all the guides who arrived individually to get a clear picture of the situation. Unfortunately, the situation as it really was could not be communicated and presented to the commander of the liner Group on "Kaiserin", whose command and signal operation was not up to the unfamiliar situation. With his superior speed and poor visibility, the extremely cautious enemy could not be stopped. The after-the-fact recording of theoretically possible successes does not do justice to reality.

The combat losses of the II Scouting Group were 21 dead, 13 seriously wounded and 30 slightly wounded.

Commanders and units of the cruisers, torpedo boats and minesweepers had happily attacked on November 17th, skillfully adapting to the difficult situation, and knowing how to evade the attack of the far superior opponent and damage it, while the battleships "Kaiserin" and "Kaiser" went with them had to content themselves with the knowledge that their appearance had more or less freed the light naval forces from severe difficulties.

Admiral Scheer emphasized that day trips were only to be carried out if airships or airplanes provided air cover, and ordered that the formations of the trip group should only cross the Hornsriff-Terschelling line after adequate aerial reconnaissance. The cover forces should be stronger in the future and be advanced considerably further. An improvement in the command and signaling system, which had not worked satisfactorily, was not immediately possible, since the weakening of this important branch of service was also due to the strong change caused by the demands of submarine warfare. As a result of the penetration of the English cruisers far into the mine area, a number of buoys, which served to indicate the area searched for mines, were removed on November 18 by barrage breakers and torpedo boats. Nothing was seen of the enemy on the outskirts of the German Bight that day.

After the way in the middle had been precisely recognized by the enemy through the practice of November 17, it was safe to assume that the way would be blocked. In fact, on November 21, the British submarine "E 34" thrown a barrage which, according to British information, should have been thrown at the location of one of the buoys that had been removed. ¹⁰¹

Considerations

This time mine barrier, which indicates that the English wanted to keep the way clear for a later time, was not found by German minesweepers and it is questionable whether "E 34" had even remotely correct equipment in the heavy seas on November 21st.

The failure on November 17, 1917 was disappointing for the English. "The powerful forces assembled for the operation had failed to cut off the minesweepers and auxiliaries they were sent to destroy. Rather, they had allowed themselves to be seduced into a long and unsatisfactory pursuit. But even this was not conducted properly and energetically, since the 1st cruiser squadron never pursued the enemy at more than 25 nm and the pursuit practically stopped at 9.40 a.m. (1)." The English Admiralty criticized above all the tactical leadership of Admiral Napier, although they largely recognized the reasons given by this leader for his behavior. The strongest complaint was the improper orientation of the units participating in this operation with regard to the mine situation in the German Bight. "These considerations represented the accuracy of the staff work in the Battlecruiser formation in question (2)." In fact, the inconsistencies in the mine maps of the participating units revealed a lack of command and preparation of the operation, which is not entirely understandable. For the future, the Admiralty took over the task of informing all authorities about the mine situation.

The battle damage to the cruiser "Königsberg" was repaired on December 15, 1917, and the ship was ready for battle again from that point on.

The operations of the cruisers Brummer and Bremse, carried out with resounding success and without recognizable enemy counteraction, naturally prompted the question of how far the U-boat trade war could be supported by other and more far-reaching operations by surface forces. Up to now, efforts against the trade war in the Hoofden and on the England-Holland road had yielded little. The interest was all the more focused on offensive operations in the northern North Sea and beyond, if possible to the west of England and Ireland. According to the reports available, the convoy traffic between Norway and England had not changed noticeably even after the attack by "Brummer" and "Bremse". The situation was assessed at the beginning of November 1917 at Fleet Command such that the Shetland-Bergen, Shetland-Vestfford and Shetland-Archangelsk roads were heavily used by convoys protected by the enemy, up to this point no reinforcement of the convoy had been observed.

The B.d.A., who was asked to comment on the possibility of cruiser attacks on these sea lanes and the sea area west of England was not very optimistic about the prospects of such offensive operations by cruisers.

¹⁾ Newbolt V. pp. 176/77.

²⁾ Newbolt V, pp. 176/77. 102

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Vizeadmiral von Hipper felt that cruiser advances to the Shetland-Bergen line were primarily a matter of luck, and would only be promising if the advance forces came by surprise. For ventures beyond the Shetland-Bergen line, the B.d.A. saw the danger of being cut off and saw in such a far-reaching approach the full commitment of the armed forces involved. Subsequent knowledge of the English defensive measures against "Brummer" and "Bremse" show the correctness of Vice Admiral von Hipper's considerations at the time. The B.d.A. planned two light cruisers for the near future, but believed that if these operations were repeated, the enemy's defenses would be strengthened and that the advance group would also need to be reinforced over time. Even if battlecruisers could still carry out an attack between Shetland and Norway in terms of the radius of action, the use of the closed 1st Reconnaissance Group made such operations quite serious and would give them the character of a naval operation from the outset. With the small number of battlecruisers, the approach of one of these valuable ships was not recommended, in order not to give the enemy an opportunity for a considerable chance of success. The coal reserves of these ships were not sufficient for any further objective.

The greatest chance of success was attributed to the repetition of the attack on the Bergen-Shetland convoy; such an operation was associated with the lowest risk, and all light cruisers, with the exception of "Stralsund" and "Regensburg", whose radius of action at high speeds was too small, were suitable for them.

If an advance against the trade route to the Vestfjord and to Arkhangelsk found worthwhile traffic there at this time of year, such an advance for light cruisers was just about possible. However, the operation to the Vestfjord led into a sea area that lay outside the restricted area, so that certain restrictions had to be imposed on actions against merchant ships sailing alone. From the outset, an undertaking that was so far-reaching by the standards of the time was dependent on the fact that only medium speeds had to be used on the approach and that the ammunition stocks did not decrease significantly before entering the area of operations.

The B.d.A. planned two light cruisers for the near future, but believed that if these operations were repeated, the enemy's defenses would be strengthened and that the advance group would also need to be reinforced over time. When approaching at medium speed, the fuel supply was just sufficient to be able to stand in the operational area for about a day. Even "Brummer" and "Bremse", which had the most favorable conditions in terms of radius of action, were only scarce and only suitable for carrying out this task if they did not have to decide to march back through the English Channel under enemy pressure. Otherwise, the main convoy routes were much more southerly than the sea area near the Hebrides, which, in terms of the radius of action, came into question as an area of operations. ¹⁰³

Page 89 Operational plans for advances by parts of the High Seas Fleet

The Fleet Commander could not ignore these not very positive statements by the V.d.A. and the associated leaders of the II and IV reconnaissance groups. In the meantime he had established, in conjunction with the Naval Staff, that dispatching light cruisers to the sea area west of England would only be successful if the disruptors of trade advanced as far as the Azores. The light cruisers "Brummer" and "Bremse" came into question for such a far-reaching task, but only if certain possibilities for increasing the fuel supply had been created. It was not possible to increase the oil supply by about 500 liters on these ships, but despite this increase in the radius of action, an operation to the Azores was only possible by sending an oil steamer to replenish fuel at sea or at a suitable coastal location. However, fuel replenishment at sea involved a considerable element of uncertainty, since in the end only oil pick-up under the coast offered the necessary security. There were no suitable places for this in the Azores, and according to the latest reports, the entire commercial shipping traffic around the Azores was to be concentrated in heavily secured convoys. However, this assumption overshot the mark. These convoys, secured only against U-boats with auxiliary ships, would have been a particularly worthwhile target for cruiser attacks.

The chances of success of such an undertaking were not rated highly, even in the Admiralty. The Admiralty therefore advised against such an undertaking. The examination of whether a cruiser approach to the America-Northern England traffic was worthwhile showed that using an oil steamer with about 1500 t Oil and increasing the oil reserves of the cruisers showed that a three-day stay in the actual area of operations with an average journey of 20 nm would be possible, but here, too, concerns prevailed. The Fleet Chief therefore refrained from pursuing the matter. An advance as far as the Vestfjord was also shelved, since Arkhangelsk traffic was said to be restricted in the meantime and there seemed to be no longer any chance of success.

The only option left for cruisers was to break into the Shetland-Norway trade route again with light cruisers when the time came.

The I. F.d.T., who had been asked about torpedo boat advances into the northern North Sea without cruiser support, expressed more confidence. Kommodore Heinrich recommended such operations in mid-November for the period from December 10th to 18th, provided the weather was suitable, i.e. no more than wind force 5 to 6 and no frost below -3°. At first he thought he had to assume that after the "Brummer"/"Bremse" operation the escort had been strengthened and that daytime attacks by torpedo boats that were not covered by cruisers should only be restricted to particularly favorable occasions. However, after reliable reports were available about the still heavy convoy traffic with little security on the English east coast and on the Lerwick-Bergen route, the I. F.d.T. the advance of torpedo boat forces in these areas for particularly promising. 104

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It had become known that the port of Blyth was set up as a hub for convoys and that steamers only sailed individually south of Blyth. For the push to the north, the I. F. d. T. suggests aiming it at about the latitude between Haugesund and Bergen and about 2° east longitude and east of it. He advised against setting up independent torpedo boat operations with a more westerly orientation, for example on the general course to the Pentland Firth or to the Shetlands, as the probability of encountering enemy forces increased near the Scottish coast and the local conditions became less favorable in the event of being caught. The task here was not to fight enemy naval forces, but the main task was to bring surface forces to bear on the trade to supplement U-boat operations. Only the 2nd flotilla with 8 to 9 boats could take part. However, it seemed inexpedient to deploy the whole flotilla, as it was too unwieldy and could not be led in marching formation or attacking a convoy without a signal. When sighting enemy forces, the long line of four groups of two boats was harder to hide from view than when only four boats approached, as I. F.d.T. considered correct for that operational area. The experience of the Battle of the Skagerrak and other occasions had shown that the boats of the II. Flotilla were too large and too unwieldy to be used in a single action.

Finally, it was possible that torpedo boats would be sent to accompany small cruisers on advances into the northern North Sea. For this, too, only boats of the II. Flotilla came, and that was at the suggestion of the I. F.d.T. three boats on two small cruisers each, under consideration. Since the seaworthiness of the boats of the II. Flotilla deteriorated much faster in heavy weather than that of the cruisers, it was necessary to detached the boats to independent tasks in good time or to release them to go home. Otherwise the cruiser enterprise would be impaired rather than strengthened by the addition of boats. For operations west of England, the use of torpedo boats was out of the question because there was not enough fuel in reserve. On the whole, therefore, Kommodore Heinrich recommended the approach of a half-flotilla in the north and one under the English coast.

On the English side, after the convoy was attacked by "Brummer" and "Bremse", the possibility of immediate reinforcement of the convoy was examined. As long as they ran daily back and forth between Norway and England, the Grand Fleet was unable to strengthen the destroyer protection of the individual convoys with its own resources. The Commander-in-Chief reported to the Admiralty on November 22 that a reinforcement of the escort by light cruisers would again increase the need for destroyers, since the light cruisers had to be protected against U-boats by destroyers. He therefore recommended using destroyers from other theaters of war, particularly the Mediterranean, for this purpose, a suggestion which the Admiralty could not approve of. It made sense to strengthen the escort protection by running the convoys only three times a week, but then with an increased number of steamers and increased protection against destroyers. ¹⁰⁵

Page 91 Advance of the II. Flotilla into the northern North Sea

For this reorganization it was necessary to relocate the assembly point for the steamers, which had hitherto been combined in the Humber, to a more northerly port. A few weeks went by with tests and preliminary considerations, until a meeting was finally scheduled in Scapa on December 10, in which a final decision was to be made on securing the northern convoy route. Here, the Firth of Forth was considered as the best collecting port. To this day no practical provision had been made to counteract retakes of the attack more successfully than on October 17, 1917.

Admiral Scheer, approving the proposals of the I. F.d.T. for the period of darkness in December 1917 a simultaneous attack on traffic under the east coast of England and between Bergen and Shetland. Only the powerful boats of the II Torpedo Boat Flotilla, equipped with a large oil supply, were able to carry out the task. In order to guarantee the subordinate commanders the greatest possible freedom of movement, Kommodore Heinrich used only one half-flotilla for each operational area. In this way both tasks could be carried out at the same time according to the order. The distance between the two trade routes made it impossible to complete the operation in one night. As a result, the advancing half-flotilla had to stay outside of the English barrier belt that closed off the German Bight, even during the day.

Accordingly, Commodore Heinrich gave the commander of the II Torpedo Boat Flotilla, Korvettenkapitän Heinecke, the order to use the flotilla boat "B 97" and the 4th Torpedo Boat Half-flotilla (Kapitänleutnant Klein, Friedrich), consisting of the boats "B 109", "B 110", "B 112" to pass the neutral channel between the German and English restricted area at nightfall, to advance towards the English coast south of Farn Island at night, to follow the steamer route southwards to about Tynemouth and to begin the march back by 6 a.m. at the latest. If nothing was sighted, the bombardment of a coastal place was left up to him.

The 3rd Torpedo Boat Half-flotilla (Kapitänleutnant Kolbe, Hans) consisting of "G 101", "G 103", "G 104" and "V 100" was to remain with the 4th Torpedo Boat Half-flotilla until about Doggerbank-Nord-Lightship and then, marching north, at dawn reach the Norway-Shetland route. During the day the half-flotilla was free to avoid enemy guards to the north, and on the second night they were to return through the Kattegat if necessary. Earlier retreat was optional as soon as the commander of the half-flotilla had achieved a satisfactory result, since it was to be assumed that this success would alert the enemy.

After the onset of favorable weather, the execution was ordered for December 11th. At 3:45 a.m. the II. Torpedo Boat Flotilla left Schillig-Reede, led by I. F.d.T., Kommodore Heinrich, on the cruiser "Emden", which remained south of Hornsriff to transmit messages and pick up the flotilla on the return.

The II. Flotilla marched at a speed of 18 nm and at 4 p.m. reached square 158 *delta* Z. 7, where the 3rd Half-Flotilla was released as planned (15 nm WSW from Dogger bank-Nord lightship). ¹⁰⁶

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"B 97" and the 4th Half-Flotilla headed for the English coast from here under the command of Korvettenkapitän Heinecke on "B 97" with the intention of being 10 nm south of Farn Island at about 4 a.m. on December 12th. At 6 p.m. on December 11, the message from the Neumünster news center arrived on "B 97" that two English light cruisers and four destroyers had left the Firth of Forth at 2 p.m. for guard duty northwards and the destroyer escort group between 8 p.m. and 11 p.m would run south. This news prompted Korvettenkapitän Heinecke to decide to run north along the English coast, rather than south, to about Berwick, to meet the convoy leaving the Firth of Forth between 8 and 11 p.m., as he assumed, between 3.30 a.m. and 6 a.m. Another report at 9 pm stated that 8 light cruisers or destroyers had been observed on the Firth of Forth, 2 destroyers and 2 guard vessels on the Tyne and 2 destroyers and 10 guard vessels on the Humber. In particular, there was no convoy traffic going in or out of the Firth of Forth that night. Rather, they were destroyers, Torpedo boats and guard vehicles to protect the War Channel and coastal traffic. The only convoys on the English coast were one convoy which had left Lerwick at 1 p.m. on the afternoon of 10 December for the south east coast and was protected by the destroyers "Ouse" and "Garry", and another Convoy, also leaving Lerwick during 10th December, bound for east coast places and led by destroyers "Rother" and "Moy". The reports from Neumünster came about through the observation of the radio traffic of various coastal forces that were on duty controlling coastal trade.

At 2:28 a.m. on December 12, a steamer with a bright stern light and dim side lights starboard ahead came into view. The steamer was heading for the Tyne and was estimated to be about 3000 B. R. T. in size. In order to save time and not reveal the presence of the boats early, the steamer was sunk by torpedoes from the "B 112" (Kapitänleutnant Hahndorf). The crew had left the steamer in the boat, so that they were not picked up because of the proximity of the coast and in order to gain time. It was the Danish steamer "Peter Willemoes" (1825 Br. R.T.), belonging to the convoy led by "Ouse" and "Garry." This convoy of six steamers was about 45 nm east of Fife Ness at 5 p.m. on December 11 and passed Longstone around midnight. With the onset of darkness the weather had become damp and opaque, so that two steamers, the Dane "Peter Willemoes" and the Swede "Nike", got lost from the convoy. No attempt was made to bring her closer, as the destroyers believed that the two steamers had headed directly for Blyth of their own accord. The convoy with "Ouse" and "Garry" was at the time of the torpedoing of "Peter Willemoes" abeam of Conquet Island about 30 nm south of Group Heinecke. As they marched on, the lights were not in sight. But the lights of Farn Island and Longstone would be needed to march north along the coast, should the safe distance from land become so great that the group got out of the way of communication. 107

Page 93 Commerce War of the 2nd Half-Flotilla off Hartlepool 93

The commander of the flotilla therefore changed his mind and decided to proceed along the coast on a course of 165° and a speed of 17 nm to the south. Although the course line was only 3.5 to 4 nm from the coast according to the data obtained with soundings, nothing could be seen from land. There was a lot of mist under the coast.

At 4:48 a.m. another steamer came into view on the port side, which was sunk by torpedoes from "B 97" (Kapitänleutnant Mejer) and "B 112" (Hahndorf). The crew went into the boats. It was the Swedish steamer "Nike" (1878 Br. R.T.), which had not moved that far from its convoy, which was now only 20 nm ahead.

At 5:14 a.m. several lights were sighted on the port side ahead, which were initially taken for steamers, but were later addressed as escort vehicles (trawlers) for the wanted convoy, which, according to a report from Neumünster at 4:20 a.m., had requested beacons in the Tyne. Two steamers were destroyed by artillery fire, two escaped (1). The gunfire was heard from observation stations at Blyth and Hartlepool but attributed to the two destroyers Ouse and Garry. Oddly enough, the two escaped guards reported on their return that they had been attacked by a U-boat in the night, so that at noon on December 12 the Admiralty had not yet learned that German naval forces had been operating on the east coast of England the previous night had.

Since there were only a few minutes left before the time ordered for the retreat — 6 a.m. — no other vessels were in sight and there was no longer any question of shelling the coast, which the flotilla commander now considered alarmed, the retreat was begun. At 5:15 p.m. on December 12, "Emden" with the 2nd Half-Flotilla came into sight as planned.

The northern group, 3rd Torpedo Boat Half-Flotilla under Kapitänleutnant Kolbe (Hans), encountered bad weather as early as 10 p.m. on the first evening while marching north. The next morning (December 12) the wind had picked up again, heavy rain gusts from the north-west with heavy seas from the same direction made it seem impossible to carry out the operation. The use of weapons and observation was not possible, so that the Half-Flotilla commander, after reducing the speed to 15 and later to 12 nm at 5:30 a.m., had to decide to break off the operation and head south-east for Utsire. After Utsire fire was sighted shortly before 7 a.m. on December 12 and the sea seemed to be decreasing (although the boats were now in front of the sea) and the barometer had stopped, Kapitänleutnant Kolbe decided to set a course north again to get to the trade lane. However, on a northerly course it was soon necessary to reduce to 15 nm again, later to 9 nm due to heavy seas.

¹⁾ According to an English source (Newbolt V, p. 187/188) only one steamer sank, three escaped. 108

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At 11 a.m. the 3rd Half-Flotilla turned around with the intention of sailing at low speed on a southerly course out of sight of land during the day, heading for the coast again when darkness fell and sailing along the coast, in order to, if possible, find a convoy grasp. The convoy's speed was reduced to 255m after "G 104" (Kapitänleutnant von Varendorff) reported at 8:40 a.m. that the starboard condenser was leaking. The dismissal of a single boat did not occur, nor was the condenser taken on immediately because of the possibility of it occurring at any time Enemy contact in question.

At 12:27 on December 12, the 3rd Torpedo Boat Half-Flotilla was on a southerly course about 50 nm west of Glotterö (59° 50' N, wind NW 5, sea state 5, high swell, somewhat hazy. At this time 3 lines to port Clouds of smoke came in sight. With increasing speed they staggered towards it and a convoy consisting of several steamers, secured by two destroyers standing in front with three funnels, and several trawlers were spotted existing convoy coming from Lerwick and expected in Marsten for the following day in the afternoon, led by the destroyers "Pellew" and "Partridge" as well as the four armored guards "Livingstone", "Tokyo", "Commander Fullerton" and "Lord Alverstone" was protected. "Partridge" and "Pellew" simultaneously sighted the German destroyers, which at first could not be determined with certainty. "Partridge" tried to show a recognition signal. It passed meanwhile 10 minutes, until the failing signal lamp came into operation. The 3rd Half-Flotilla, meanwhile, was rapidly approaching and when "Partridge" recognized the enemy characteristics of the approaching destroyers from the incorrect response to the recognition signal finally given and warned "Pellew", the distance had dropped to around 70 to 80 hm. The deception attempted by "G 101" to reply with the observed recognition signal call was no longer significant. Kapitänleutnant Kolbe decided with "G 101" (Kapitänleutnant Mayrhofer), "G 103" (Kapitänleutnant Metger) and "V 100" (Kapitänleutnant Lindau) to attack the destroyers, while "G 104" (Kapitänleutnant von Varendorff), which was slowed down by its leaking condenser, was to begin destroying the steamers. Meanwhile the English destroyers had prepared the battle, ordered the convoy to disperse and intended to defend the ships entrusted to them as best they could. Shortly before combat action began, "Partridge" managed to transmit a radio message reporting that the convoy was in combat contact with an enemy whose number and type was unknown. The two destroyers were standing somewhat to the lee of the convoy, which had been fired upon by "G 101" for a short time at about 30 hm. After "G 101", "V 100" and "G 103" had pulled ahead of the steamers, at 1:05 a.m. the fire was shifted to the destroyers, which were running at high speed. It came to about 50 hm to the ongoing fighting on an easterly course, "G 101" took the front, "V 100" and "G 103" the rear destroyer under fire. "Pellew" and "Partridge" stood in the very brisk weather the leeward position very unfavorable. 109

109

3rd Half Flotilla sinks a Convoy

Spray water hit the gunners in the face, and at times there was little to be seen of the German destroyers apart from masts and funnels, so the fire of the English destroyers was poor. The attempt by Kapitänleutnants Kolbe to reduce the battle distance by lying close was unsuccessful, as the enemy kept turning away and did not let the distance fall below 40 hm. The favorable position of the boats of the 3rd Half-Flotilla soon made itself felt: "The Germans made admirable use of their advantage and, as usual, their fire was extraordinarily accurate and rapid. Although the terrifying accuracy of enemy fire meant death for most of those who watched, officers and crews of the British destroyers watched the impact of the German volleys with a kind of bitter admiration (1)." 10 minutes after opening fire, the English aft destroyer "Partridge" lagged behind, blowing off a lot of steam. A grenade had damaged the main steam pipe in the front engine room, the engine room quickly filled with hot steam and the boat came to a standstill. The personnel in the engine room were killed by scalding. The chief engineer did not succeed in penetrating the engine room with a support group. A few minutes later the rear gun was disabled by a shell, and almost simultaneously a torpedo from two, one each from "V 100" and "G 103" fired at the stranded "Partridge", hit the destroyer amidships. In this desperate situation, the commander of "Partridge", Lieutenant-Commander R. H. Ransome, gave the order to abandon the destroyer and ordered everything to be done to hasten the sinking of the boat. During this time, "V 100" and "G 103" came within torpedo range for "Partridge". Two officers, Lieutenant Gray and Walters, manned the aft torpedo tube and fired one torpedo, the "V 100" from a distance of 100 m hit, without to detonate. Lieutenant Gray (2), who was later wounded, was rescued from "Partridge" by "V 100" with other survivors. Partridge sank soon after the torpedo hit.

While "V 100" received orders to rescue the "Partridge" crew, "G 103" followed two escort steamers escaping to the south-east. "G 101" had meanwhile followed the moving "Pellew", which soon came out of sight in a squall of rain. Falsely assuming that it was inferior to "Pellew" in terms of speed, "G 101" did not push; he also did not want to spread the half-flotilla too far and not move too far from the convoy. In fact, "Pellew" had received a hit in the engine room and with falling steam reached the saving squall after having fired a torpedo shortly before. The torpedo happened immediately behind the stern of "G 103" after the boat had avoided it with "Hard rudder" and "Ultimate power ahead". "Pellew" reached Norway with a broken port engine. Now the entire convoy including the four armored trawlers was sunk.

¹⁾ Newbolt V. p. 189.

²⁾ A nephew of Sir Edward Grey. 110

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1 hour 13 minutes after the smoke clouds were first seen, the work of destruction was done. 4 officers and 48 men were taken as prisoners from the destroyers and trawlers, and 23 men from the steamer crews were rescued. Own losses were 1 dead and 3 wounded. The sunken steamers were:

English armed steamer "Cordova"			2284			
Danish mot	tor ship	"Kong Magnus"	1101		"	
Norwegian	steamer	"Bollsta"	1701	"	"	"
		"Torleif"	846		"	
		"Bothnia"	1723	"	"	"
Swedish	"	"Maracaibo"	525	"	"	"
			8180	Br.	R.	Γ.

Neither the English destroyers, guards and steamers, nor of course the 3rd Torpedo Boat Half-Flotilla, knew that strong English naval forces were not far from the battlefield. Although the Admiralty had not received any indication of the imminence of a German operation on December 11, the cruisers of the III. Light cruiser squadrons "Chatham", "Yarmouth" and "Birkenhead" with four destroyers under the command of Captain L.C.S. Woolcombe departed from Rosyth at 6:15 p.m. on December 11 to be 30 nm WSW on December 12. The formation was to search the exit of the Skagerrak in the direction of Bovbjerg and start the march back after dark. Another formation under Captain V.V. Molteno on "Shannon", consisting of "Shannon" and "Minotaur", belonging to II Cruiser Squadron, had left Scapa Flow with four destroyers at 11 p.m. on December 11, to cross as additional security on the Lerwick to Norway road. This group was tasked with picking up the convoy coming from Norway the morning after it left port. On the way east the cruisers were to cover the convoy destined for Norway, which they would meet in the course of the day. At noon on December 12, the Shannon Group was a good 60 nm west of the convoy secured by "Partridge" and "Pellew" on an easterly course. About this time "Shannon" picked up the aforementioned radio message from "Partridge" about encounters with German naval forces. Since "Partridge" had no knowledge of the presence of the Shannon Group, the radio message was only addressed to the Commander-in-Chief. At 1:15 p.m. "Shannon" received a second radio message, which was partially garbled by enemy interference, but the content revealed that German Destroyers were 25 nm southwest of the entrance to Bjornefjord. At the first message, the formation had increased the speed to 20 nm, and at 1:15 p.m. the destroyers were sent ahead, while the cruisers followed at 20 nm.

The Commander-in-Chief received the first message about the battle at 1:25 p.m. without further information on the strength and composition of the enemy encountered. 111

The English measures

He immediately had the V Battle Squadron, the II and IV Light Cruiser Squadrons and the Battle Cruiser Formation up steam, as he braced himself for an advance from the High Seas Fleet. When he soon afterwards received the second report, this time from "Shannon", of the presence of German destroyers, he ordered the III Light Cruiser Squadron to proceed in the direction of the reported enemy. Shortly before 3 p.m - Habers wrote to the Admiralty about the combat action in the north, after the news had arrived a few minutes earlier that German destroyers had been operating off North Humbrian during the previous night of a major naval operation, the Admiralty ordered the Grand Fleet and the Harwich forces to get up steam and be ready in 1½ hours.

At 3 p.m. the destroyers of the Shannon Group, steaming ahead, encountered the boats and rafts with the survivors of the convoy. Shortly after 4 p.m. a radio message from the commander of the "Pellew" reported that the destroyer had reached Slotterö badly damaged. Since the 3rd Torpedo Boat Half-Flotilla had a considerable lead over the Shannon group, there was no way for them to get close to the German destroyers.

The situation was different with the III Light Cruiser Squadron, which was operating in the area of the German retreat when it received the first report from "Partridge". At this time, the III Light Cruiser Squadron was about 50 nm south of the convoy. It was in a reconnaissance line about 10 nm long on a course SE towards Bovbjerg. The alarming report shortly after 1 p.m. was picked up by the destroyer "Rival", which was providing submarine protection for "Birkenhead", and reached the leader of the association with a certain delay at 1:25 p.m. This immediately put the association on an opposite course in the direction of the reported enemy. The formation reconnaissance in a northerly direction all afternoon and would probably have sighted the 3rd Torpedo Boat Half-Flotilla if it had set a direct course for Helgoland.

After the destruction of the convoy, the 3rd Torpedo Boat Half-Flotilla had gathered and at 2 p.m. started to march back on a southerly course. After a notification from the I. F.d.T. when the 3rd Half-Flotilla had arrived and that a temporary strong westerly wind was to be expected in the North Sea, Kapitänleutnant Kolbe decided to first head for land at 4:15 p.m. The 3rd Half-Flotilla had probably slipped past the English formation in the direction of the Norwegian coast between 5 and 6 p.m. without noticing anything; this had gathered at 5 p.m. with the onset of dusk and had marched on in keel line. The retreat of the 3rd Torpedo Boat Half-Flotilla passed without further incident. The wrecked destroyer Pellew was brought into Scapa Flow by Shannon, Minotaur and four destroyers on the morning of December 15th.

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The consequences of the attacks against English maritime trade by the 3rd and 4th Torpedo Boat Half-Flotilla were far-reaching. On December 15, 1917, three days after the events on the east coast of England and in the north, a conference was held at the Admiralty in London which approved measures then ordered but not yet in effect to improve the protection of the Scandinavian convoys: in future the meeting point for the convoys, which were now only to run three times a week in each direction, was to be Methil; daily convoy traffic was envisaged between the Humber and Methil. The greater distance envisaged for crossing the North Sea between Aberdeen and Bergen instead of between Lerwick and Bergen, and the fact that the new thoroughfare was closer to the German Bight, now required increased protective measures. In organizational terms, these fell to the Commander-in-Chief of the Grand Fleet, who was responsible for the safety of the convoys as soon as they set sail from Aberdeen or Bergen. The Admiralty was responsible for handling the steamer traffic and assembling the convoys.

Admiral Beatty now took a decisive step that brought about a definitive departure from the previous naval strategy. He regularly divided off a battle squadron to provide escort protection, a measure whose absolute necessity could not be denied. In the course of the year 1916/17 the will to battle had already changed in such a way that the use of the assembled Grand Fleet was only planned under favorable conditions and in certain sea areas, which were delimited by 55° 30' N and 4° E (1). This slight inclination to the ultimate ratio of the decisive battle was at times further restricted by a lack of destroyers. As early as the end of 1916, as a result of the lively activity of German torpedo boat forces in the English Channel, the Admiralty had ordered the reinforcement of the Dover Patrol at the expense of the Grand Fleet and drawn drastic conclusions from this regrouping for the combat readiness of the Grand Fleet: when the Grand Fleet went to sea, parts of the IV. Battle Squadron if the Commander-in-Chief did not consider his destroyer forces strong enough to provide U-boat protection to all ships (2). This alone created the compulsion to avoid decisive battles as soon as and as long as the conditions mentioned were met. According to the new situation, the Grand Fleet was fundamentally and regularly reduced by one squadron, which was indispensable for the decisive battle, especially since, in addition to this task force, about 30 destroyers were on duty for escort purposes. This charge for escort protection permanently weakened the Grand Fleet, because if combat suddenly became necessary, it was not to be expected that the parts of the fleet at sea could be called in good time. The compromise that the Germans had been striving for since the beginning of the war had now been practically achieved through operations on the smallest scale. These were fundamentally different from all previous ones. They were not just challenges or pinpricks like the earlier coastal bombardments, but aimed at vital and extremely sensitive nerve cords of the English economy.

¹⁾ North Sea VI. p. 67.

²⁾ North Sea VI. p. 233. 113

Repercussions on British naval warfare

These attacks therefore required immediate and vigorous countermeasures under all circumstances. It was no longer up to the British Naval High Command whether or not they wanted to accept the respective German advance as an annoying but not decisive disturbance of their naval interests.

The attack by German U-boats and surface forces on sea trade routes, which were vital for England's supply, dominated English naval strategy: the entire force of the English navy had to be concentrated on repelling this threat, all strategic plans had to be directed towards this task, which was decisive for England's war. If hitherto the amalgamation of the Grand Fleet according to tradition and strategic planning had been the pledge of England's security and the means of banishing the specter of invasion and, if necessary, of blocking the High Seas Fleet's route to the strategic centers in the English Channel and the northern outlet of the North Sea, so the now visible danger forced a turning away from the previous path.

A report submitted to the War Cabinet by Admiral Beatty in the first days of 1918 sheds light on the change in the strategic naval situation: "As long as the enemy remains in his ports, he can attack our vital maritime trade on the inner line with forces whose strength is at his discretion to operate with the Scandinavian countries. Its internal situation, the presence of its agents in neutral ports from which the convoys depart, facilitate the execution of surprise attacks superior to our cover forces.

To state an extreme case, it is decidedly impossible to cover the escort traffic with the whole Grand Fleet, while it is possible for the whole High Seas Fleet to launch a surprise attack with a reasonable chance of reaching its bases (1)." The Commander-in-Chief of the Grand Fleet finally summed up his opinion by saying that it was no longer desirable to provoke a naval battle even when there was a favorable opportunity to do so. So large parts of the English naval forces were active in defending against the U-boat war that one could not count on being able to oppose the High Seas Fleet with adequate strength. Admiral Beatty considered the German battlecruisers, to which he erroneously attributed the battlecruiser "Mackensen", which was not completed during the war, to be superior to the English: "Compared to 6 German units — "Mackensen", "Seydlitz", "Moltke", "Derfflinger", "Hindenburg", "von der Tann" — of 9 English battlecruisers only 3 — "Lion", "Princess Royal", "Tiger" — are suitable to fight in the battlecruiser line. The "Renowns" are insufficiently armored, the "New Zealands" and "Inflexibles" are not adequate in terms of speed, armor and armament. In addition, the use of our destroyer forces in U-boat warfare would obviously result in the German flotillas outnumbering ours in naval operations. After all, the new type of shells that would be decided after the Battle of Skagerrak had not yet been delivered to the Grand Fleet.

1)	Newbolt	V.	P.	206.	114
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Page 100 3. The activity of the High Seas Fleet until the end of 1917

By the summer the bulk of our battle squadrons would be fighting with shells that were admittedly of poor design. Was it wise, under the circumstances, to cling rigidly to the old policy of forcing a battle whenever an opportunity arose?" The Commander-in-Chief held that this was not the case: "The foregoing inquiry presents the situation as I see them: Properly seen, as I think I am, and accepting the principle that trade must be protected, the conclusion to be drawn is that proper naval strategy is not to bring the enemy into combat at all costs, but to keep him as far as possible in his bases until the general situation becomes more favorable for us (1)." The Admiralty agreed with Admiral Beatty's remarks and underlined his last observation by ordering that the mine blockade of the German Bight be promoted by all means.

This English view of the strategic naval situation could not be assumed, since Admiral Beatty made assumptions that overestimated German strength. It was impossible to assume that the English commander-in-chief considered nine English battlecruisers, some of which were stronger, some at least as strong as five Germans, to be inferior to them. The German Naval War Staff and the Chief of the High Seas Fleet were not sufficiently aware of the fundamental importance of the convoy attacks by "Brummer" and "Bremse" and the 3rd Torpedo Boat Half-Flotilla. Even if these undertakings were not underestimated as factors in the trade war, Admiral Scheer saw them as no more than an occasional opportunity, which could hardly be maintained in the long term, to increase the effect of the U-boat trade war. It was to be foreseen that the enemy would take countermeasures and that it would soon be necessary to deploy correspondingly stronger advance groups. Eventually, when a concentration of the High Seas Fleet became necessary to counter a convoy, the operational objective could shift to the point where the destruction of valuable covering forces became more important than the sinking of steamers. Securing the freedom of operation of the U-boats by fighting the growing threat from mines was paramount; mine countermeasures placed so much strain on all units of the High Seas Fleet that it was necessary to wait and see how the Scandinavian convoys were being covered before any major undertakings in this direction could be approached.

1) Newbolt V	V. p. :	$207.^{115}$
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4. Flanders (June 1, 1917 to January 31, 1918)

General situation

The effect of the U-boat trade war had peaked between the spring and summer of 1917. The submarines based on Flanders made a significant contribution to the overall result: the Flanders submarines achieved their highest sinking figure in May with 195,000 tons. It was to be expected that these successes would drive forward British countermeasures and that these would be directed particularly against the Flemish ports, the aprons of which were closest to the enemy's grasp. Even if all efforts to destroy the bases in Flanders by bombardment from sea and by air raids have remained in vain (1) and landings to conquer the coast were hopeless given the strength of their defense power, so the commanding admiral in Flanders had to be wary of surprises.

At the end of May 1917, Admiral Ludwig von Schröder assessed the situation in Flanders with regard to enemy operations from the sea against the coast to the effect that submarine warfare from Flanders could be paralyzed

by blocking the exits with mines and nets, destroying the bases by shelling from the sea or conquest of the coast

could be attempted. On the occasion of a lecture during a visit by the First Quartermaster General, General Ludendorff, he explained the following: "Mines and nets can be laid close to the coast at night or in fog. However, the enemy will not be able to guard all such barriers close to the coast because they are in the area of our fortifications. We will therefore be able to remove these blocks after a relatively short period of time. Their effect will only be temporary.

The enemy can lay barricades outside the area of our coastal fortifications at any time, without our being able to prevent it from land or with the available naval forces. Such barricades will be difficult to remove given the strong counteraction to be expected and will represent a considerable handicap for our U-boats, even if they do not make traffic impossible in one fell swoop.

	1) Nordsee	VI, p. 336. —	– For the foll	lowing see M	Aap 3 in the	appendix o	of this
volum	e. ¹¹⁶			C	•		

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Mingres .
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4. Flanders to January 1918

Since the enemy has not laid any such barricades for months, it must be assumed that he still intends to operate with naval forces in the waters off the coast. Further shelling must therefore be expected.

The main targets of *shelling* are the locks at Zeebrugge and Ostend, primarily at Zeebrugge. Other targets are port facilities with the vessels in them, coastal fortifications. If the enemy wants to fire during the day in clear weather with observation from the ship, i.e. under the most favorable artillery conditions for him, he must come within the direct range of our guns, so he must use his ships to the fullest. Whether he will do so is questionable. He will probably continue his attempts to bring his artillery to bear with aerial observation in unsightly weather, possibly supported by artificial fog, or also at night, but to evade sight if possible. He will fix the point from which he will fire beforehand, mark it with barrels, and thus have at least a useful indication of the distance.

For us during the day everything depends on gaining superiority in the air with the help of our own single-seater combat aircraft, in order to drive off the enemy's spotter planes and to zero in on our own batteries. Firing the shore batteries without reasonably accurate observation, i.e., a sort of scatter fire to the sea is out of the question. Given the small size of the targets, it would mean useless wear and tear on the barrels.

At night the enemy can get even closer than during the day and, even if he does not have precise observation, can still achieve something with mass use of artillery; with long-range guns, under favorable circumstances, he could even fire on the Bruges shipyard. The distance between Zeebrugge and Bruges is about 10 km, so the enemy could still stay 15 km from the coast.

It will generally not be possible to drive off the enemy with the surface forces of the Marine Corps, since the enemy knows their strength and always appears with a very strong superiority of light security forces. One or two U-boats are constantly guarding the coast, but in view of the strong counteraction and the shallow water it will be difficult to fire. Sending out further U-boats at the beginning of a bombardment is only recommended under special circumstances, because the exits, at least the one from Zeebrugge, are under fire and because the boats cannot dive up until 12 km from the coast, therefore from the enemies are noticed. The shallow monitors are inherently a bad target for the torpedo, which needs a certain water depth.

Keeping the enemy off the coast by laying out your own mine barriers is not an option with regard to your own submarines, whose navigation would be endangered by this. Besides, mines have only a limited effect against shallow vessels, especially with the prevailing tidal range. 117

Page 103 Enemy and own forces and intentions

A *landing of the enemy* with strong forces on the Flanders coast can be considered impossible. It does not seem feasible to completely defeat our shore batteries, even if the entire English fleet were involved. If it were possible to shake a section of the coast by artillery, the enemy would have to stop firing at the strip of dunes the moment he sent his boats ashore, and it would still be possible to repel the attack with infantry defense and machine guns. The disembarkation of landing troops, even in calm weather, is difficult and time-consuming, and is a moment of weakness for the enemy, the proper exploitation of which must ensure our success.

The enemy knows this and will not attempt a landing on a large scale at all, at most he will pretend to intend to land in order to hold on to our forces.

A *raid* on any point on the coast with weak forces at night or in fog would be conceivable. But such a thing could never bring about a resounding success and would not be worth the effort."

In addition to these enemy attack methods considered by the commanding admiral, a considerable intensification of the air warfare against the bases and shipyards was to be expected. Although enemy air activity had not caused any serious damage up to the beginning of June 1917, reports now increased that attacks from sea and air against Zeebrugge, Bruges and Ostend were imminent. The strength of the sea and air forces available to the commanding admiral of the Marine Corps to repel the expected attacks was small compared to the forces that the enemy might have to use.

The following forces were available to the Flemish Marine Corps on June 1, 1917: *War organization*.

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Destroyer Flotilla Flanders:
                                      Flotilla Boat: "V 47"
1st Destroyer Half-Flotilla:
                                                    2nd Destroyer Half-Flotilla:
"V67", "G 95",
                                                    "S 15", "S 20",
"V86", "G96"
                                                    "S 24", "S 18"
(each boat three 10.5 cm SK.);
                                                    (each boat two 10.5 cm SK).
                              III. Torpedo Boat Flotilla (1)
                                  Flotilla Boat: "S 53"
5th Half-Flotilla:
                                                    6th Half-Flotilla:
"V 71", "V 81", "V 73"
                                                    "G 91", "V70", "S 54", "S 55"
                             (each boat three 10.5 cm SK.).
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1) The Chief of the III. Torpedo Boat Flotilla was at the same time leader of the Torpedo Boat Forces Flanders (F. d. I. Flanders). 118

4. Flanders until January 1918

Torpedo Boat Flotilla Flanders Flotilla Boat: "A 43".

(some of these boats were replaced by A-II boats over the next few weeks).

Flemish search Half-Flotilla: Half-Flotilla boat: "A 19",

"A 7", "A 14", "A 11", "A 13", "A 4".

Outpost boats: 7 armed steamers.

U-Flotilla Flanders: 32 operational U-boats.

Remote control boats: "FL 6", "FL 8", "FL 9", "FL 12", "FL 13".

Seaplanes: about 40 operational seaplanes.

Under construction: Motorboat Division Flanders with motorlaunches, seaworthy

motorboats and speedboats.

The English attack on the night of 4/5 June 1917

By the end of May 1917, extensive minesweeping had ensured that no new nets and mines were laid off the coast. During minesweeping on May 31, English mines were discovered when searching square 036 *beta* at the top right (51° 36' N, 3° 10' E). On June 1st and 6th, the contaminated area was partially cleared of mines after further mines from 51° 35' N, 3° 9.5' E in the direction rw. 71° were determined. It was a contamination of the Steen Dieps carried out on February 15, 1917. The final clearing of this lock before the eastern exit (west of the Eastern Scheldt) was completed by June 13 by the 2nd Torpedo Boat Half Flotilla Flanders; the barrier had consisted of 20 mines.

The first days of June 1917 showed an increase in offensive activity from sea and air. The enemy took advantage of clear nights for air raids, which on June 1, 1917 were aimed at the locks and the Zeebrugge mole. No military damage was done. The Bruges and Ostend shipyards were also attacked from the air. During air raids that took place on June 3rd and 4th, the guard boats "V 71" and "V 73" were attacked with bombs on the morning of June 3rd without success. During the attack the following night, the Zeebrugge pier was hit with 15 to 20 bombs, with the wall at the foot of the pier being damaged by 5 hits; except for a temporary traffic disruption, there was no military damage. A total of around 150 bombs were dropped near Bruges between June 1st and 4th, of which only 5 had reached the shipyard site. The attacks had come from about 2000 m altitude and had been favored by moonlight and good weather. During the last attack, for the first time several airplanes, which communicated with each other by light signals, were observed over Bruges at the same time.

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Security tasks

Searchlights and flak had lately often been taken under machine gun fire from the plane. During the night of June 3rd and 4th, the St. Pol airfield near Dunkirk and the port facilities of Dunkirk were attacked by German aircraft (Seeflugstation I and Kampfstaffel 23) with a total of 3400 kg of bombs.

Our own air reconnaissance could be carried out regularly during the day with excellent weather and almost always good visibility from daylight to dusk. From dusk until the early hours of the morning, one A-I boat (1) each patrolled off Ostend and Zeebrugge. To protect them, two large torpedo boats each advanced with changing courses to the area of possible bombardment positions before dawn.

On the night of June 4/5, in addition to the patrol boats, "A 39" (Oberleutnant z. S. Ernst) and "A 45" (Oberleutnant z. S. von Rosenberg) from the Flanders Torpedo Boat Flotilla were in action between 11 p.m. and 1:30 a.m in the direction of Ostend Bank — Middelkerke Bank, with the main purpose of searching for and destroying enemy motor boats. There were no particular signs of a conspicuous accumulation of enemy naval forces, but airmen had reported the night before that many searchlight signals had been seen in the area west of the Dover-Calais strait, and that the war lights of the English and French ports were burning. The tense situation, extremely favorable weather and the full moon period made enemy operations more likely.

On June 5th, the torpedo boats "S 15" (Oberleutnant z. S. Jacobs, Diedrich) and "S 20" (Kapitänleutnant Giese) sailed under the command of the commander of the 2nd Z Half Flotilla (Kapitänleutnant Zander) in calm weather and a smooth sea, full moon and very good visibility towards Thornton Bank from Zeebrugge. The aircraft reconnaissance late in the evening had revealed nothing in particular, and the "A 39" and "A 45" crossing off the coast had also noticed nothing unusual. The usual patrol drive was carried out as an early reconnaissance in a north-northwest direction in order to report enemy forces approaching from Dunkirk in good time. After nothing was in sight by 3 a.m., the return march was started at 154° and a speed of 21 nm. At 3:20 a.m. 3 to 4 small vessels, which were mistaken for motor boats, came into view on port 4 line astern. "S 15" and "S 20" ran north and west behind the vehicles in order to spot them exactly.

1) Coastal torpedo boats A 1—25. Year of construction 1914/15. Water displacement 100 t. 41 m long, 4.6 m wide, 1.5 m draft, speed 19 knots. Armament one 5 cm gun, two torpedo tubes, four mines, crew 28 men. Due to their limited usability, they were only used in security and mine service, and they were soon replaced by the more powerful A-II boats (A 26-55. Built in 1916/17) and A-III boats up to 56 to 95. Built in 1917/18) envisaged - 250 or 350 t water displacement, 50-60 m long. 5.3 — 6.4 m beam, 2.3 m draft, 26-28 kn, two 8.8 cm guns, one torpedo tube, crew 29-50 men. These boats have proven themselves in escort service. — The transfer of the A-I and A-II boats to Flanders took place in disassembled condition by rail. 120

4. Flanders to January 1918

Gradually about 12 vessels came into view, which were mistaken for minelayers or, given their speed, for motor torpedo boats. The observations on that night and on the morning of June 5 were often adversely affected as a result of distortion caused by refraction; with the uncertain visibility conditions at dawn, which did not allow for a perfect measurement of distance, and the strong reflections on a smooth sea and calm air, nothing precise could be made out. When at 03:35 it appeared that there was one destroyer leader and 12 destroyers, the torpedo boats began to march back towards the coast with utmost force. The enemy, who made the recognition signal with the searchlight, opened fire at about 90 hm, "S 15" and "S 20" replied immediately. A heated rearguard action ensued under heavy pressure from the greatly superior enemy, in which the 13 enemy vessels stood in a semicircle behind the two boats, namely 4 light cruisers, 1 flotilla cruiser and 8 destroyers, led by Commodore Tyrwhitt. Under the starboard side of the bridge there was a strong stream of steam, fragments of the same hit had the commander, Captain Lieutenant Giese, killed; Lieutenant at sea Groß (Wilhelm) took over the command of the boat. The enemy was meanwhile astern, so that the front guns of the two torpedo boats could no longer get their target; when smoke was poured on both boats, the enemy could only be seen temporarily on the aft gun due to the fog that was turned on. On "S 20" the revs of the engines dropped quickly, finally the boat stopped moving. Impact followed impact: Leutnant zur See Groß was forced to try to blow up the boat with the aft torpedo. He left the bridge to which he had proceeded from the artillery stand, on deck. The attempt at detonation was unsuccessful: the torpedo tube could not be swiveled and the finished bolt could not be removed because the rods had been shot up. At that moment a grenade detonated near Lieutenant z. S. Groß and wounded him in the right lower leg. The stern burned brightly from hits to the aft ammunition chamber. It was now about 4 o'clock. The front torpedo head burned down with a bright flame, everything under the bridge was completely shot up. Lieutenant z. S. Groß gave the order to leave the boat, which was already deep in the water ahead. Shortly thereafter, "S 20" sank over the bow, until the end under fire from an English destroyer. The crew of the boat had tried calmly and resolutely to eliminate the disturbances. Lying wounded in the water, Lieutenant z. S. brought Groß when sinking "S 20" three hurrahs, in which the crew drifting around joined in loudly.

"S 15" was also under the heaviest enemy fire. The English destroyers had positioned themselves very well with 15 and 10 cm guns, driving zigzag courses gave only little relief. At 3:55 a.m. near Bruges, F.T. - support message requested by aviators, after the presence of enemy destroyers and a destroyer leader had been reported at 03:34 and 03:50. At 3:56 a.m. it was observed on "S 15" that "S 20" turned up, stopped and continued to fire vigorously with both guns until it sank. 121

"S 20" sinks in battle with British destroyers

At 4:02 a.m. it was reported to Bruges that "S 20" was lost. The English destroyers had meanwhile come up considerably; one large destroyer each on port and starboard 4 points more astern than abeam was felt to be particularly annoying, which came up quickly and finally up 40 to 50 hm away almost abeam of "S 15". Other destroyers followed at full speed, all of which fired vigorously. In the meantime, both guns on "S 15" could again be brought into action on different targets. At 4:03 a.m. "S 15" received its first hit, namely on the port side under water in the rear turbine. The room quickly filled up, the turbine failed — the boat was still 17 sm away —. Shortly thereafter, the rudder gear was hit, but this did not prevent operation of the rudder; the entire gun control of the rear gun failed. The gun was carried by the wounded artillery officer, Lieutenant Z. S. von Grafenstein, the boat's No. 1 seaman and the reserve crew and fired until the end of the battle. In the meantime, the entire stock of the aft ammunition chamber had been expended in rapid rapid fire, interrupted only a few seconds by a jammed load. More ammunition had to be manhandled from the bow above deck. The battle had gradually drawn into the area of the shore batteries. At 04:08 immediate fire was ordered off the Bruges coast. At 4:10 a.m. the third hit on "S 15", namely in the fan head of the front turbine. At the same time, as a result of an unnoticed underwater hit, the turbine room filled up and had to be abandoned. The turbine continued to run for 15 minutes without personnel; the boat was still going 12 nm. The personnel in the machine and boiler rooms had given their best under the prudent guidance of the chief engineer, Obermachinisten Heidelberg, to keep the "S 15" operational. When "S 15" passed Blankenberghe Buoy at 4:18 a.m., the shore batteries were beginning to open fire. The enemy turned and stopped firing. "S 15" stopped firing at 4:20 a.m.; at 4:25 a.m. the boat remained stranded and was later towed to Zeebrugge by tugboats.

"A 39" and "A 45", which had returned after the advance, had received the order from the gunfire of the battle to go into immediate readiness to run out. They left at 4:30 a.m., helped towing "S 15" and arrived in Zeebrugge at 6:15 a.m. with "S 15".

The losses that morning on "S 20" were 49 dead, including 3 officers, 5 wounded, including one officer; on "S 15" 4 dead and 8 wounded, including 1 officer. The enemy had picked up 7 German sailors in a cutter, but failed to rescue other people swimming in the water. During the morning, 27 survivors and 35 bodies were recovered by German seaplanes and torpedo boats. English losses have not been published; after the sinking of "S 20" a fire was observed on an English vessel.

At 3:38 a.m. the command post of the 1st Marine Division received the report from "S 15" about sightings of enemy destroyers. In the meantime it was becoming daylight and in the north numerous clouds of smoke, which were rapidly approaching, came into view. 122

4. Flanders until January 1918

Further reports confirmed that there were numerous light forces. At about 3:45 a.m. from the divisional command post, on the west-to-east horizon, a wide, dispersed line of vessels could be seen, which were rapidly approaching and apparently held two torpedo boats running at high speed toward the coast under heavy fire. The sinking of the burning "S 20" which was still firing was observed. Shortly after 4 o'clock the identification signals of "S 15" could be clearly made out. Batterie Hertha opened fire at 160 hm against enemy destroyers at 4:11. At 4:20 a.m. Battery Kaiser Wilhelm II opened fire on a vehicle with four chimneys at an altitude of 330 hm. After Battery Hertha had fired 18 shots and Battery Kaiser Wilhelm II. 5 shots, the enemy moved out of range of the shore batteries.

At about 4 o'clock a blurred image of a number of vessels, apparently heading east, was seen from western parts of the coast, about level with the Middelkerke bank. The batteries were alerted, the Tirpitz battery, which was the first to come into question, was unable to fire aimed fire at the blurred, unmeasurable and untouchable target. At 4:15 a.m. the group of vessels standing approximately abeam was enveloped in a thick layer of fog making them completely invisible, in which at 4:23 a launch muzzle flash could be seen. It was now clear that they were firing monitors surrounded by foggy security forces. By clipping the muzzle flash, range and direction for the batteries could now be determined. Batterie Tirpitz opened fire at 4:28 a.m., Battery Deutschland at 4:36 a.m. on the shots that had meanwhile been found hard to the west of the first sighted muzzle flash. Although the observation conditions were extremely difficult due to the thick fog surrounding the enemy, especially for the artillery pilots, Battery Tirpitz was able to stay on target by cutting into the high projectile impacts that often rose above the fog and the muzzle flash. As confirmed by air traffic observation, one's own shooting was in the immediate vicinity of the enemy, who, contrary to previous behavior, continued to fire. The monitors had their bombardment position about 240 hm west of the shipyard area. The coastal bombardment, which was carried out between 4:23 and 5:02 a.m. with 115 shells, was initially in front of the Ostend mole, gradually the fire was shifted to the shipyard area and its immediate vicinity. The shipyard and port of Ostend were fogged up, a measure that didn't have the full effect because the enemy had already zeroed in when it was fogged up. A faster start-up of this means of defense, which is good for the present conditions, was prepared for the future. The effect of enemy fire was significant. In the harbor "UC 70", steamer "M 3", a suction dredger and two barges were hit and caused to sink! "S 55", "A 13" and "UC 16" were slightly damaged, the newly built forecastle for "G 41" (1) was destroyed together with the slipway; the flood gate of the lock to the shipyard basin received a heavy hit.

1)	North	Sea	VI. p	. 164	ff. ¹²³	
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Shelling of Ostend

Several workshop buildings and the port station were damaged, some of them severely. Since the workshop machines and the hoist itself suffered only minor damage, operations did not experience any major interruptions.

On the same night, from 11 p.m. until dawn, there had been continuous air raids on Bruges and Ostend. About 70 bombs were dropped on the northern port area and the immediate vicinity: "V 73", "S 54" and "G 91" were damaged by fragmentation. The area of the artillery depot was also attacked: an ammunition shed and the railway tracks on the Zeebrugge Canal were damaged slightly damaged 11 bombs were dropped near Ostend without causing any military damage.

The operation of the English armed forces on the night of June 4th and 5th was of a larger scale and had been prepared for a long time; its execution had been abandoned twice for weather reasons. Three parts of the fleet had approached the coast of Flanders: the focus was on the bombardment formation led by Admiral Bacon, which was heading for Ratel bank and consisting of 2 monitors, "Erebus" and "Terror", the two flotilla leaders "Botho" and "Faulknor", 6 destroyers "Lochinvar", "Lance", "Manly", "Mentor", "Moorsom" and "Miranda", 2 P-boats and 12 motor launches. The second group, led by Commodore Tyrwhitt, had the task of covering the bombardment with 4 light cruisers, a flotilla leader and 8 destroyers; she headed for Thornton Bank. They were the light cruisers "Centaur", "Concord", "Canterbury" and "Conquest", the flotilla leader "Lightfoot" and the destroyers "Surprise", "Truculent", "Starfish", "Recruit", "Taurus", "Sharpshooter", "Satyr" and "Torrent". A third formation, light cruisers "Undaunted", "Cleopatra", "Aurora" and "Penelope" and destroyers "Thruster", "Redoubt", "Skiful", "Phoebe ", "Sybille", "Retriever", "Radiant" and "Springbok" headed for the Schouwen bank.

The group "Lochinvar" and "Lance", which marched a little ahead of the firing group as security, approached the Ratelbank shortly before 2 a.m., sighted German destroyers on an easterly course and reported them at 2:42 a.m. The English squad leader considered the German destroyers to be outnumbered and felt compelled to withdraw. Admiral Bacon was reluctant to hand over forces to the advanced unit from the firing squad because he considered the situation in the vicinity of the German submarine base to be too threatening and did not want the presence of stronger armed forces to be recognizable. When he got near the intended firing point, just before 3:30 am, gunfire was heard to the north: judging by the state of affairs they must have been Commodore Tyrwhitt's forces. The latter had arrived near Thornton Bank at 3:15 am and decided to set a southwesterly course. Standing between Bligh and Thornton Bank at about 3:30 a.m., he sighted 2 destroyers on a westerly course ahead, which he initially took to be forces of the bombardment group. However, they were soon spotted as German destroyers, and the light cruisers and destroyers opened fire.

4. Flanders to January 1918

After "S 15" and "S 20" — these were the ones in question — had turned around and "S 20" remained badly damaged, had Commodore Tyrwhitt give chase with "Taurus", "Sharpshooter", "Satyr" and "Torrent" and rallied the rest of his forces. The third group under "Undaunted" watched the battle without leaving the assigned station. At 4 o'clock Commodore Tyrwhitt recalled the pursuing destroyers because he thought he noticed stronger German destroyer forces to the south and was pulling his pursuing destroyers out of the effective range of the shore batteries. An attempt by Admiral Bacon to cut off the march back of the "S 15" by dispatching "Mentor" and "Miranda" also failed.

The English bombardment unit had been able to improve its navigational position by taking a bearing on Ostend Cathedral when it began to get light and anchored around 4 o'clock. The motor launches laid a smoke screen. The shelling began at 4:20 a.m. and lasted 40 minutes. Zeroing and firing was supported by observation aircraft, but target observation was more impaired by fog over Ostend than the Germans had assumed (1). The fire from the German batteries, which began a few minutes after the monitors opened fire, was well on target, according to the British, but caused no damage. At 5:20 anchor was weighed and the return march to Dover started. Commodore Tyrwhitt closed in on the firing squad from the north.

During the retreat, the torpedo aircraft "T 991" (Lieutenant z. S. Löwe, Lieutenant z. S. Thomsen) tried to attack an English formation with its torpedo. As soon as the aircraft started to attack the line from a forward position, the enemy turned away. This was repeated three times, with "T 991" being heavily fired at with HE shells each time it emerged from the sun and turned away. It was impossible to carry out a successful torpedo attack under the present circumstances; "T 991" finally gave up its intention.

The rest of the activity of the aircraft from the Flanders I and Flanders II seaplane bases that morning was limited to reconnaissance in the sea area off the coast. Current reports were given about the approach and the activity of the monitors, destroyers and motor boats cruising off the coast. Some of the planes were heavily fired upon and came into brief combat contact with English single-seater fighters without result.

The brave behavior of "S 15" and "S 20" was emphasized by Admiral von Schröder in the war day order of June 9, 1917: "I speak to the commander of the 2nd Z-Half Flotilla, Lieutenant Zander, for his determined leadership in the battle on June 5 June morning, I would like to express my special appreciation to the crews of both boats involved for their exemplary behavior."

On the British side, the considerable success of the bombardment of Ostend on the morning of June 5 was not unknown. Regularly repeated attacks from sea and from the air were bound to result in considerable difficulties for the Flemish bases in the long run.

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1) Bacon, The Dover Patrol, p. 110. 125

Shelling of Ostend

Admiral Bacon considered further bombardment to be possible only under perfectly favorable conditions. Months passed before larger attacks against the bases from the sea were renewed (1).

Attacks against the coast from sea and land and related combat operations (June 5, 1917 to January 31, 1918)

Another bombardment of the coast was planned for June 19, but the formation had turned around because the wind had turned offshore. At 3:45 a.m. that morning one of the Flanders planes had sighted an English shelling force on a SW course off Westhinder, consisting of two monitors, a large number of torpedo boats, steamers and motor launches. After the alarm was issued, the aircraft had to turn away due to heavy fire from destroyers, but was able to spot and report the formation again on a westerly course at around 5 a.m.

On the same day—June 19—there were further battles in the morning hours. At 5:45 a.m., the three sea combat single-seaters "1044" (Vizeflugmeister Dyck), "1054" (Lieutenant d. R. d. MA Bachmann), "788" (Flugmaat Bieber) took off from the Flanders II sea air station for reconnaissance to the west and north. At 6:05 a.m. they sighted three enemy aircraft near Westhinder — 1 Short biplane and 2 Sopwith — which were immediately attacked. In the course of the battle, a Sopwith aircraft was shot down by Vizeflugmeister Dyck. The enemy aircraft crashed vertically from a height of 400 m and smashed completely on the water. Leutnant d. R. d. M. A. Bachmann attacked the Short and after a brief struggle forced him to descend on the water. The second Sopwith sat down behind Leutnant d. R. d. M. A. Bachmann and fired on him from a short distance. Flugmaat Bieber attacked the enemy from astern, whereupon the enemy flew off. In pursuit, Flugmaat Bieber fired about 150 shots at the Sopwith, but had to break off the battle because of a machine gun failure. Well According to later reports, this Sopwith went over on its head during an emergency landing off Ostdunkerke Bad. Vizeflugmeister Dyck had received a shot in the abdomen during the air battle, but he had managed to land the machine safely at the Westhinder lightship Friedenslage. The other two planes landed next to him, Flugmaat Bieber took over Vizeflugmeister Dyck and brought him back by air. Vizeflugmeister Dyck succumbed to his fatal wound in the course of the morning. His machine was brought in almost undamaged by torpedo boats in Zeebrugge in the afternoon.

At 8 o'clock the boats of the III. Torpedo Boat Flotilla "G 91" (Kapitänleutnant Frorath), "V 71" (Kapitänleutnant Ulrich), "V 73" (Kapitänleutnant Delbrück) and "V 81" (Kapitänleutnant Ehrlich) under the leadership of the Chief of the 6th Torpedo Boat Half-Flotilla (Kapitänleutnant Claussen) the end.

1) Newbolt V, pp. 45 to 48. 126	

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4. Flanders to January 1918

While an English lieutenant was being taken on board as a prisoner with their own aircraft, "V 71" opened fire on enemy forces that came into sight in a southerly direction. The Commander of the Half-Flotilla had the boats gathered on "V 71" and the enemy aircraft sunk by "V 81". One large and two small enemy destroyers came into view, drifting to the WSW in a fog. The enemy was fired on with a few volleys over a distance of 90 hm, the impacts were difficult to observe. A few minutes later, a motorboat launched an attack. In the well-placed salvos of the Half-Flotilla it turned away, a torpedo track was not sighted. Soon after, at 10:08 a.m., another motorboat approached the boats at changing speeds up to a distance of 10 hm, the 5th Half-Flotilla headed for the motorboat. A torpedo track was sighted by "G 91" and "V 73" which went astray. The motorboat defended itself with machine guns; it was also attacked by planes with machine guns; shot at and sunk by a hit from "V 81". Two English officers and the seriously wounded motor mechanic, who died on the way to Zeebrugge, were taken over. The same or another motorboat had previously been in the firing range of the Beseler battery, had been fired at by 8 rounds and had come out of sight in the fog.

On June 27, Ostend was shelled by heavy land guns (30 cm). Shipyard and port received 8 shots. The damage to property was minor and there were no casualties. The installations were fogged up in good time. The heavy artillery was fired upon by the 15 cm battery of the II. Marine Division and the fire broke off after about an hour.

After monitors had been observed several times in July west of Ostend and near the coast, on July 25 at 4:23 a.m. the boats "G 91" (Kapitänleutnant Frorath), flotilla boat, and "S 55" (Kapitänleutnant Holscher) were picked up 6th Torpedo Boots Half Flotilla (Kapitänleutnant Claussen) on patrol in heavily hazy weather numerous enemy forces, which were identified as two groups of monitors with two light cruisers and 30 to 40 destroyers and steamers as well as motor boats, sighted in 059 beta. The 6th Torpedo Boots Half Flotilla alerted the coast with rockets and radio messages and, together with aircraft, made contact with the enemy, briefly getting into a firefight with a destroyer at around 6 o'clock. From 6 o'clock the batteries of Tirpitz, Deutschland and Kaiser Wilhelm II opened fire on the enemy one after the other at 300 to 360 hm. A total of about 40 shots were fired, which were close to the target thanks to the good observation work of our artillery pilots. At about 8 o'clock the enemy rallied and ran off to the northwest. The contact boats "G 91" and "S 55" were repeatedly fired upon by the monitors without success and at around 8:30 a.m. the English destroyers forming the rear guard were involved in a brief skirmish. There was no loss or damage on our side. One of our planes thought a bomb it hit on a destroyer. 127

Page 113 Activity of the shore batteries

On the same day at about 6:20 p.m. (July 25), Battery Tirpitz again fired on a monitor, a small cruiser and a destroyer flotilla with the help of air observation with a few shots. The monitor immediately turned north under smoke from the accompanying destroyers. The artillery aircraft (pilot Flugmaat Sutor, Observer Vice Flugmeister d. R. Greiser, Arthur) was heavily fired on from board and four land combat single-seaters, one of which was shot down; the contact had to be given up because of the strong opposition.

Combat activity against the coast was quite small. On August 5, the Oldenburg battery and the village of Raversyde were shelled. Unsuccessful shelling by monitors took place on August 10th and 21st and on September 4th in the morning and at noon on Ostend and Battery Tirpitz. As soon as the shore batteries opened fire, the monitors, who, in addition to their work in security surveillance, were to fire at the Ostend shipyard as soon as suitable weather conditions offered the opportunity, left. However, the opportunity was often missed again before the arrival of smoke vehicles and artillery planes to be called for from Dunkirk (1). Some of the monitors fired at such great distances that they did not reach the port entrance of Ostend. During the bombardment on 21. On August 1, the artillery aircraft "1240" (Lieutenant d. R. d. M.A. Arthur (2), which was fired at by a monitor with explosive shells, received a few hits in the upper deck) on September 4 at noon, 1 man was killed in the Tirpitz battery, 2 slightly wounded, without property damage being caused by the bombardments mentioned.

On August 22, the enemy attacked Zeebrugge with a torpedo attack. At about 4 o'clock a torpedo detonated inside the Zeebrugge pier about 10 m behind the stern of "V 68" without damaging the boat. A second torpedo ran ashore near Battery Augusta without detonating. Enemy forces were not seen from shore or from the outpost boats; it was assumed that they were motor boats that attacked together with planes (3). Engine noises could not be heard during the simultaneous air raid and defensive fire. Between 5 and 6 a.m., aircraft "1245" (Flight Mate Meyer, Lieutenant d. R. M. A. Greiser, Arthur) of the Naval Coastal Aviation Department was attacked by a speedboat with machine-gun fire. The aircraft received numerous hits in the radiator and pipes, so that the cooling water squirted out; both occupants were wounded. The plane still flew 6 nm without cooling water, then had to make an emergency landing 12 nm abeam Middelkerke and was towed to Ostend. Apparently the speedboat was a boat that was returning after the mole attack.

At 5:40 p.m. on September 5, Ostend and Battery Tirpitz were hit by a heavy railway gun with 15 shells. Shipyard and battery Tirpitz became foggy. The shipyard received a hit in the machine building hall, the damage was minor; in the city 2 soldiers dead, 4 wounded, 4 Belgians dead, 27 wounded.

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¹⁾ Bacon. p. 110.

²⁾ On August 20, 1917 Promoted to Lieutenant d. R. d. to M.A.

³⁾ See p. 251 below. 128

4. Flanders to January 1918

Only on September 22, at 6:20 a.m. and 7 a.m., Ostend was shelled again from the sea by the monitor "Terror"; it caused considerable material damage in the shipyard. The shelling group was heavily fogged during the shelling; "Terror" fired about 36 shots, 15 of which hit the shipyard and 7 hit the city. In the shipyard, the hoist partially sank with a strong list and trim. One end of the pontoon with the boats "A 13" and "A 45" being repaired lay aground. Steamer "Alice" and a dredger, shipbuilding locksmith shop, electrical power station, mechanic's workshop, galvanizing shop and the roof of the temporary dock were damaged. The damage was also extensive in the city; there were 4 dead and 4 seriously wounded, as well as many victims among the Belgian population A heavy projectile hit the entrance to the cathedral Of the planes that had risen to direct the fire from the Tirpitz and Deutschland batteries, plane "1089" (Vizefeuerwerker d. Ruräh, Flugobermaat Steinitz — Flanders Navy Coastal Aviation Division) was shot down. A second plane alighted close to Ostend, and the occupants could be rescued with injuries. The batteries therefore fired due to the failure of the aircraft observation with the support of the captive balloon and the observation of the sound measurement team.

Shortly after noon on September 24, the Pomeranian battery, which had been fired upon on September 11 with 6 rounds of heavy artillery from land without effect, was fired upon by enemy shore batteries with around 350 rounds. There were no significant losses. The shelling of Ostend was continued on September 25 between 4:35 and 4:53 p.m. by "Terror" with about 30 rounds. The coppersmith and mechanic workshop of the Ostend shipyard were destroyed. Artillery planes found the bombardment forces, which were heavily fogged in. Batteries Deutschland and Tirpitz fired on the enemy; a projectile landed near the destroyer "Broke", on which for the day was First Sea Lord Admiral Jellicoe with some Admirals accompanying the American Admirals Mayo had embarked as a spectator of the bombardment by the "Terror" (1). In the immediate vicinity of the bombardment group, bitter dogfights took place with several enemy Spad single-seaters, one of our planes was forced to land; the crew was saved by two of our own planes, the machine was destroyed and lost. On the same evening, shortly before midnight, Ostend was shelled from land. The 10 shots observed were in the city, there was no material military damage; 5 houses collapsed, 6 soldiers dead, 14 Belgians dead, 24 seriously wounded.

In retaliation for the bombardment of Ostend, Battery Pommern fired 20 shots at Dunkirk on September 25 by moonlight with air observation, hits being scored in the harbor area; an English steamer was sunk.

1) Bacon. 1	p. 111. ¹²⁹	
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Shelling of Ostend continued

A shelling of Ostend by a monitor on October 20th scored a hit into the carpentry with two shots fired, dealing insignificant damage. The enemy observation planes turned away as our planes approached, lack of sight prevented further pursuit. On the following day, October 21, shortly after midday, monitors abeam Nieuport fired on Battery Tirpitz with aircraft observation. The enemy artillery planes were disturbed by our own F.T. jamming station and soon pushed aside by our fighter planes. Only the first shots were in the battery without causing damage; the later ones wounded some soldiers and Belgians, 2 civilians were killed. After the enemy was identified, Batterie Tirpitz returned fire, the monitors turned off after about 20 shots. Towards midnight of that day the Aachen battery was fired upon by heavy caliber without damage being done.

Almost two months passed before a monitor opened fire again on the afternoon of December 19 against the coast, namely against Battery Prussia. About 10 shots of the heaviest caliber were fired without causing any damage. Batteries Prussia, Tirpitz and Deutschland returned fire with some shots, forcing the monitor to stop firing and run north.

On January 19, 1918 at 4:30 p.m., a squadron of about 12 enemy aircraft appeared at high altitude north of Ostend. At the same time, "Erebus" opened fire on the shipyard and port entrance of Ostend. Both were immediately fogged up, battery Tirpitz and Prussia returned fire. After about 24 shots, the enemy stopped the bombardment and moved away to the west Airborne and meanwhile launched own plane was unsuccessful because of insight. The property damage in the shipyard, which had received about 10 hits, was insignificant, only the coppersmith and a control room were significantly damaged, the dry docks and the new workshop remained intact.- On 25 On January 1st, Dunkirk was occupied by artillery fire from Pommern Battery.

On January 31, between 10:40 p.m. and 11:25 p.m., the coastal batteries of the western sector were fired at with about 150 medium-caliber rounds without causing any particular damage or casualties.

Although the impact of the monitors was not great during the rarely carried out shelling of the coast, especially the shipyards, these special vessels played a considerable role in supporting and backing up the fight against the U-boats' entry and exit routes. The naval forces deployed by the English to block the sea space off the Flanders coast with mines and nets, the so-called blocking formations, were largely based in Dunkirk. When the weather was favourable, the raiding force generally appeared off the coast of Flanders in the morning hours in order to proceed to Dunkirk for the night. A certain routine had become established here, which made it easier for the German minesweeper and security forces to coordinate their search, clearance and control work with the habits of the English blocking formations. ¹³⁰

4. Flanders to January 1918

The War in the Air

There was little reconnaissance activity by the enemy naval air force in the immediate coastal area, a consequence of the air superiority achieved over enemy seaplanes. From our own air and sea reconnaissance, enemy reconnaissance aircraft were only spotted very sporadically over a period of weeks, although it was often hazy. Enemy land planes were occasionally observed patrolling the perimeter, which land front planes liked to use as a pick-up position. It was not until the beginning of September 1917 that enemy aircraft were again found in increased numbers in the security area and in the Flemish coastal area. As a result of this increased reconnaissance activity, our own battle squadrons were deployed in the sea area; the enemy, too, often secured his sea reconnaissance aircraft at the barricade with combat single-seaters.

On October 1, 1917, the Flanders Sea Front Squadron was formed to be able to fight enemy landplanes over sea with your own landplanes. The main tasks of this squadron should be the escort and protection of their own seaplanes as well as independent reconnaissance in sea areas with strong enemy counteraction, such as in the Channel and off the Thames. Use on the land front or to protect your own installations was only an option if the tasks of naval warfare did not suffer as a result.

Trained sea pilots were provided as crew for these aircraft. *The offensive activity of the enemy air force* was different from the restrained reconnaissance activity. On June 17 at 11 a.m. there was an air raid on the Bruges shipyard, in which "UB 20" (Oberleutnant z. S. Glimpf) was insignificantly damaged; an air raid on Zeebrugge on June 23 was unsuccessful. During a bomb attack on the Bruges shipyard on the night of July 2nd and 3rd, the flotilla boat of the III Flotilla, "S 53" (Kapitänleutnant Götting, Friedrich), damaged by a direct hit in Section VIII (oil bunker) and leaked in Section X-XII by a bomb that went into the water next to the bow. Four compartments were full of water, the oil fire in compartment VIII was extinguished by flooding the room, the boat was drained by pump steamers and the leaks were sealed by advanced dam sails. "S 53" was towed to Ghent for repairs and was ready for action again at the beginning of January 1918.

During air raids on July 13, 16 and 17, bombs were dropped near the Bruges shipyard, near Zeebrugge, Ostend and the Rombacher Hütte, and on July 22 also unsuccessfully on torpedo boats off Zeebrugge. The attack on July 16 took place for the first time without moonlight, and strong sealight was an essential aid in approaching the coast, the entrances and channels on dark nights. None of these attacks caused any military damage.

From the second half of August 1917 there was a substantial increase in air raid activity against the Flemish bases and the coastal area. ¹³¹

Dogfights in the summer of 1917

The following summary gives an overview of the air raids and their effects from August 1917 to January 31, 1918:

- 10 August 1917: 3 enemy planes drop 10 bombs over the Steenbrügge artillery depot: no military damage.
- August 16, 1917: In the night from August 15 to 16, air raids between 2 and 3:15 am on the Ostend harbor entrance. "A 13" from the Flanders Minesweeper Half-Flotilla sank as a result of a direct hit on the port side near the engine room. 2 men were slightly wounded. 6 bombs from Naval Station without doing any damage. Wounded 2 soldiers in the city.
- August 18, 1917: Enemy planes drop bombs on various points on the coastal front. Between midnight and 1 a.m. attack on the Zeebrugge lock: no damage done.
- August 19, 1917: After midnight, bombing raids on the shipyard and around Bruges. Shipyard is fogged and protected by barrage. No damage.
- August 20, 1917: Between midnight and 1 a.m., around 20 bombs are dropped near the Steenbrügge artillery depot without causing any damage.
- August 22, 1917: 3 o'clock at new moon and a starry night air raid on Zeebrugge pier, 4 bombs fall on the pier. "A 44" slightly damaged: 3 bombs fall close to the forecastle of the boat, which is penetrated by about 40 splinters. Of the people under the forecast who could no longer reach the shelters because of the heavy barrage, 1 dead, 4 seriously injured, one of whom died afterwards Minor damage to the pier.
- 25/26 August 1917: 10:30 p.m. air raid on Bruges shipyard. Enemy plane is pushed off by barrage, flies over Dutch territory, drops bombs there and is fired upon by Dutchmen. Subsequent air raids until 1 a.m. in the vicinity of Bruges: no damage.
- 31. August 1917: 9 p.m. enemy plane drops 5 bombs on battery Germany without causing any military damage.
- 1 September 1917: From midnight to 1 a.m. air raid on the Bruges shipyard and artillery depot Steenbrügge. Shipyard fogs up, no damage.
- September 3, 1917: At midnight, an air raid on the Bruges shipyard, around 50 bombs fell on the shipyard and the immediate vicinity. "UB 54", "A 49" slightly damaged, "A 39" more severely damaged. The stern of "A 39" suffered a leak and buckled, and the boat was out of readiness for war for several months. The slight damage to the stern of "A 49" was caused by the same bomb. Repelling this attack was made more difficult because the attack took place almost simultaneously with the return of Kampfgeschwader 1 of the OHL (Kagohl I) from a bombing flight to Dunkirk.
- 4 September 1917: 3rd night of September 3rd to 4th heavy air raids on the city and port of Bruges. Shipyard, protected by fog and barrage, only gets 2 incendiary bombs that do no damage. Several bombs near the branch canal. Several houses are destroyed in the north town. 10 Belgians killed, no military damage. At 12 o'clock 17 enemy planes attack Bruges city and port. ¹³²

4. Flanders to January 1918

- 7 bombs at the branch canal, 6 at the lock: no military damage, 1 seriously wounded, 3 slightly wounded. About 20 bombs on the north-west edge of the city: 3 residents seriously injured. At the same time enemy planes throw bombs at our fishing boats abeam Groden battery. In the evening heavy attack by at least 15 large aircraft on the Bruges shipyard, around 60 bombs fall on the shipyard area. "S 18" is slightly damaged by explosives on the outer skin under the bridge and on the forecastle. 2 bombs explode close to the stern of "S 54" tear off the seal box, filling up the compartments under repair. The steamer "8" lying between "S 54" and the quay wall was crushed by the boat and sank. 2 bombs hit shipbuilding hall and cause fire. A bomb renders Crane 16 unusable. Dropped 2 bombs on the shipyard in Ostend without doing any damage.
- September 5, 1917: Around noon, a squadron of about 22 aircraft attacked the Bruges shipyard from an altitude of 4500 to 5000 m with light bombs. Apart from a hit on the railway bridge over the Ostend canal, which can still be turned, no military damage. In addition, 2 bombs are thrown in front of the Blankenberghe harbor entrance.
- September 9, 1917: Air raid on Wenduyne in the middle of the day when the weather cleared up: no damage, 2 wounded.
- 10 September 1917: 4 p.m. air raid by 10 enemy aircraft on the port and shipyard of Bruges. 14 bombs on shipyard site: negligible damage, 1 Belgian seriously wounded. Several bombs fell on the northern harbor area: "G 91" and "V 70" minor damage, 6 lightly wounded. From 9:40 p.m. to midnight weak air raids on the Bruges shipyard and the northern harbor area: no damage. An air raid on Ostend shipyard at midnight was unsuccessful.
- September 11, 1917: 9:15 p.m. air raid on Bruges, no bombs on the shipyard and port area.
- September 12, 1917: Shortly after midnight, air raids on the Zeebrugge pier and lock by around 20 enemy planes with around 40 bombs: except for one hit in the engine house, damage to an excavator and an underground cable in the lock, no material damage: 1 man seriously wounded, 2 slightly wounded.
- 14 September 1917: 4 p.m. air raid on Zeebrugge, some bombs fall into the water, no damage.
- September 15, 1917: Around 3 p.m. off Ostend, the steamer "W 2" and about 50 Belgian fishing vessels were hit with about 25 bombs by enemy planes, vehicles were undamaged. Enemy destroyers took part in the attack with artillery fire.
- September 16, 1917: In the evening, enemy planes drop bombs on Negerdorp Ostend, 2 houses are damaged.
- September 17, 1917: 8:40 a.m. an enemy plane bombards the Ostend mole and beach with a machine cannon. Battery Beseler and steamer "W 2" fired on him. The plane crashed burning, both occupants dead.
- September 21, 1917: Air raid on Ostend shipyard in the evening, 4 bombs cause insignificant property damage.
- September 22, 1917: Enemy planes drop 4 bombs in the area east of the Ostend shipyard around noon without causing any damage.
- September 24, 1917: 2 p.m. some enemy planes dropped bombs on an A-boat at Zeebrugge Mole 4 without hitting. ¹³³

Dogfights in the fall of 1917

- September 27, 1917 An enemy squadron, coming over Holland, bombs Ghent. Between 8 and 9 p.m. air raids on Bruges and Zeebrugge. 6 bombs on north harbor area do no damage. About 32 bombs at the Zeebrugge lock: no damage, no casualties.
- September 29, 1917: At 2:00 p.m., an enemy bomb squadron of 13 aircraft, coming from the sea via Vlissingen, attacked Ghent with about 50 bombs. Between 8 p.m. and 9 p.m. air raids on Bruges and Zeebrugge. In the Bruges shipyard, 2 motor boats, the loading bridge and crane at the Zeebrugge lock were damaged, otherwise no losses or damage.
- 30. September 1917 1 Around midnight around 18 aircraft bombs near the Zeebrugge lock. A bomb hits the electric cable. After a few hours, the lock is clear again.
- 1 October 1917: Enemy aircraft squadrons, coming over Dutch territory, attack Ghent. Several air raids on Ostend and Zeebrugge during the night without causing any damage.
- 2 October 1917: Air raid on Ghent by English squadron in violation of Dutch neutrality. During the course of the evening numerous air raids on Bruges, Zeebrugge, Batterie Deutschland and localities in the land sector.

October 6: The fogging of the Bruges shipyard against night air raids is given up as useless and partly disadvantageous. According to the personal observations of the air force commander, the white fog stands out very visibly against the black surroundings on dark nights and offers a very clear target. In addition, the low-lying fog leaves higher-rising buildings uncovered. Effective protection can only be achieved by using a very large number of smoke drums, which would be able to completely envelop not only the installations requiring protection themselves, but also their immediate surroundings, regardless of the wind direction. This cannot be done in a facility as extensive as the Bruges shipyard. Attempts are made to obtain black fog, from which better results are expected.

- October 14, 1917: In the night of October 14th to 15th air raid on the city and Port of Bruges. Of about 30 bombs thrown, 7 fall on the border canal of the former port guard, the rest in the city: no military damage, 7 soldiers slightly wounded, 1 Belgian dead.
- October 15, 1917: Around midnight, heavy air raids by about 10 large aircraft on the Bruges shipyard. Airplanes attack in pairs from 2600 m altitude. Searchlights, barrage and aiming fire push them away from the wharf, on which only 5 bombs fall without doing any damage. 3n the city, 12 houses are almost completely destroyed. 16 Belgians dead, around 20 partially severely wounded.
- 21 October 1917: Enemy air squadron of 15 planes attacked Wenduyne, Nieuwmünster, Vlisseghem and Houttave at 1 pm with about 40 bombs: no military damage. 1 woman. 2 children dead, 1 child seriously injured.
- 22 October 1917: at 2.15 p.m. the Zeebrugge pier and lock are hit by around 30 bombs, 4 of which hit the pier. The rest fall into the water and into the open field: 3 men wounded, otherwise no casualties and no damage to property. 134

4. Flanders to January 1918

- 2:35 p.m. in Ostend, 3 men are killed by 8 aerial bombs, 1 soldier and 7 civilians are injured, material damage is minor. Around 8 p.m. weaker air raid from Bruges. Shipyard and Port area do not receive bombs.
- October 27, 1917: At 2:45 p.m., enemy planes dropped some bombs into the water abeam of Knocke.
- October 28, 1917: During the night various bombing raids by enemy squadrons against Gistel, Snelleghem and Varsenaere: no damage, 7 men wounded. 2 planes attack the Naval Werst in Hoboken near Antwerp, but are pushed back by defensive fire, no damage.
- October 29, 1917: Varsenaere airfield is hit around midnight with 20 bombs that do no harm. November 6, 1917: At around 1 a.m., enemy planes dropped 2 bombs south of Steenbrügge, later 4 bombs near Gistel.
- November 9, 1917: From 10:35 p.m. to 11:40 p.m., about 6 large English aircraft attack the Bruges shipyard. Searchlights and anti-aircraft fire prompted the planes to drop their bombs before reaching the target. Of about 18 bombs, 12 fall west of the north port area, the rest south-east of the same. 2 houses destroyed, 3 Germans wounded. 1 German dead, 2 Belgians dead, no military damage.
- November 13, 1917: Enemy aircraft squadrons attack Vlisseghem at about 4 p.m. from an altitude of about 5000 m with 30 bombs without result.
- 4th December 1917: 3m enemy air raids carried out during the night on Middelkerke, Zande, Zevecote cause no damage.
- December 5, 1917: At around 11 p.m., an enemy plane attacks the Bruges shipyard and the northern harbor area with 4 bombs. "V 47" receives a hit in the oil bunker of boiler room I. Bomb easily passes as a dud and causes only minor damage; otherwise no damage.
- December 6, 1917: A squadron of 12 enemy biplanes attack Uitkerke airfield with bombs at midday.
- December 8, 1917: A squadron of 7 large aircraft bombs Aertyke airfield around noon: no damage.
- December 10, 1917: Around 1 p.m., a squadron of 10 enemy planes occupied the ammunition dump and Varsenaere airfield with about 10 bombs: no damage. Unsuccessful enemy air raids on Bruges, Houttave and Nieuwmünster during the night, no damage worth mentioning.
- December 11, 1917: Bombs dropped near Bruges and Ichtegem in the middle of the night. Water main and Bruges power station slightly damaged, otherwise no damage or casualties.
- December 18, 1917: Heavy enemy air raids on Bruges, mainly on the artillery depot and the train station. Traffic Bruges Ghent is blocked for a few hours due to damage to the tracks, otherwise no damage.
- December 19, 1917: Ostend unsuccessfully attacked by enemy airmen.
- December 24, 1917: At 2.30 a.m. Bruges shipyard and artillery depot is attacked by 8 large enemy aircraft. 50 to 60 bombs, none of them in the shipyard or artillery depot. 2 lighters with cement and gravel are hit and made to sink in the Ostend canal between Nordhafen lock and Varande bridge. 135

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Dogfights by the end of 1917

Otherwise no significant damage, no casualties.

- January 22, 1918: Enemy planes attack Ostend train station at around 2:30 am with 5 bombs: minor damage.
- January 29, 1918: An enemy squadron of 8 biplanes occupied Coolkerke airfield, Werst Bruges and Dudcele between 1:50 and 2:30 p.m. with about 22 bombs: minor damage.
- January 30, 1918: at 2:10 p.m. a squadron of 9 enemy planes appears heading for Bruges via Leffinghe.

 Defense by I. Marinefeldjägerstaffel and anti-aircraft guns. An enemy plane crashes in flames, the others reach Bruges and lay about 12 bombs on the Steenbrügge artillery depot: minor damage.

Shelling of Flemish bases and air raids were a link in the chain of efforts to get to the root of the U-boat war. These attempts to directly destroy the berths and the shipyard facilities indispensable for U-boats and surface forces have so far had little success, but they forced considerations and measures, as with others. If the attacks were intensified, certain relief for Zeebrugge and Ostend could be created. On July 8, 1917, the General Command of the Marine Corps decided to use the docks and workshops in Ghent for Marine Corps purposes. In addition to the shelling from the sea and the air raids, the proximity of the Ostend shipyard to the land front played a role in this decision. If Ostend failed, the Bruges facilities would not meet the requirements of naval warfare. Although the canal route to Ghent offered difficulties, the spacious docks and all kinds of resources, the greater distance from the front and the resulting increased security were decisive in the decision. The aim was to be able to use the Ghent shipyard for the operations of the Marine Corps in about 4 to 5 weeks. Since the Ostend shipyard was likely to be shelled more frequently from sea and land, operations at the Ostend shipyard were severely restricted on the orders of the commanding admiral. Valuable parts of the shipyard were moved to Bruges and Ghent, only a few smaller repair workshops and equipment stores remained.

Battles of the coast, which combined naval and air forces against the barrage

The enemy blocking formation usually stayed so far from the coast that shore batteries could only rarely be used against them. In general, a few shots from the shore batteries at long ranges were sufficient to drive monitors or light naval forces that were approaching closer to seaward and thereby relieve our own naval forces patrolling or working in the vicinity of the barrier. 136

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	All girl (Alberta) is bloom of the

4. Flanders to January 1918

The protection of demining operations, *i.e.* securing and fighting against the forces of the blocking formations, was one of the most important tasks of the III. Torpedo Boat Flotilla and Z Flotilla Flanders. The intensification of the mine and net war clamped all Flemish naval forces in a crowded day and night program. This trench warfare led the coastal batteries and naval forces to an ever more intimate interaction with the air units of the Flanders I and II naval air bases, which through reconnaissance, security and combat against the air and naval forces of the blocking means guarding and complementary enemy played an essential part in keeping the routes open and securing the bases in Flanders.

On July 3, a monitor reported lying at anchor in the Potse position was driven off by the 38 cm gun of the Moere position, and on July 29 enemy torpedo boats at the barrier were driven off by Battery Deutschland with just a few shots. The Deutschland, Tirpitz and Kaiser Wilhelm II batteries fired on the naval forces of the barrier on three days in August, on six days in September and on two days in October. On November 4, a monitor in 059 ß came under fire from the Prussian and Deutschland batteries. On December 12th, Kaiser Wilhelm II. Battery took 5 destroyers of the security guard, which in the morning from "S 61" (Kapitänleutnant Keil), "S 63" (Kapitänleutnant Loeffler) and "G 95" (Kapitänleutnant von Eichhorn) of the 2nd Z- Half-flotilla had been involved in long-distance combat until the safe departure of the minesweepers, with balloon observation under fire in 036 \, The Deutschland and Tirpitz batteries fired at a monitor standing in 066 ß the enemy forces were driven out in December 1917. There were two more attacks, in January 1918 by the Kaiser Wilhelm II, Deutschland and Tirpitz batteries once again on units of the security guard. At midday on August 12, three torpedo planes of II T Squadron (Oberleutnant z. S. Wedel) attacked the perimeter guard under cover of three single-seater combat aircraft. 1,400 kg of explosives were dropped and the effect of hits on the stern of a destroyer was believed to be perfectly observable.

It was not uncommon for skirmishes and shootings to take place between German naval forces and the blocking formation. On the afternoon of July 25, there was a short firefight between German naval forces and the blocking formation. The 1st Torpedo Boat Half-Flotilla Flanders (Kapitänleutnant Densch) and the boats "A 39" (Oberleutnant z S. Ernst), "A 40" (Oberleutnant z S. Ganguin), "A 43" (Oberleutnant z S. Eggemann) were secured by boats "V 71" (Kapitänleutnant Ulrich), "V 73" (Kapitänleutnant Delbrück), "V 81" (Kapitänleutnant Ehrlich), "G 91" (Kapitänleutnant Frorath), "V 70" (Kapitänleutnant Lemelsen), "S 55" (Kapitänleutnant Holscher) of the III "A 47" (Oberleutnant z S. Hormel) of the 1st Torpedo Boat Half Flotilla Flanders was slightly damaged by a larger piece of explosives on the funnel casing. 137

Fight against the blocking Formations

The enemy then came north out of sight. A new large net mine barrier was found between him and the A-Boats, which ran from 060 ß northeast corner to about 059 ß bottom right in the direction ENE/WSW and on which clearing work was started immediately. "G 91", "V 70" and "S 55" were left behind to secure minesweeping, while the other three boats pushed west. In about an hour, 2 enemy light cruisers, 12 destroyers and 1 monitor came into sight. "G 95" (Kapitänleutnant von Eichhorn) and "V 67" (Kapitänleutnant Waltz) of the 1st Z Half Flotilla had meanwhile attached themselves to the advancing torpedo boats. Around 5 p.m. good lying fire forced our torpedo boats to move out of the firing range turned west, the clearing of the barrier could continue.

At 6 a.m. on August 26, an Erebus-class monitor opened fire at 110 hm against the two patrol boats "V 70" (Kapitänleutnant Lemelsen) and "V 73" (Kapitänleutnant Delbrück). After 6 shots from the monitor, the unsuccessfully battle was broken off.

On the afternoon of September 24, the Minesweeping Half-Flotilla was working in the contaminated area north of Middelkerke Bank. The protection was "V 71" and "V 73" of the 5th Torpedo Boat Half-Flotilla under the leadership of the half-flotilla commander (Kapitänleutnant Carlowa). The two boats "A 40" and "A 50" of the 2nd Torpedo Boat Half-Flotilla Flanders (Kapitänleutnant Lütjens) did not work on the net because of the lack of sight, but were attached to "V 71" to reinforce the security of the minesweeping half-flotilla. When the minesweeper half-flotilla was on a SSE course, an English flotilla leader with 4 destroyers came into sight astern shortly after 5 p.m.. The enemy suddenly emerged from the unsightly weather, initially steered an easterly course and turned towards the minesweeper half-flotilla as soon as he found them identified as hostile due to non-observance of the identification signal. The enemy opened a wellplaced fire at 60 to 65 hm on the minesweepers, who slipped their devices and tried to evade the enemy fire by fogging. "V 71" (Oberleutnant z. S. Schmundt), "V 73" (Kapitänleutnant Götting, Friedrich) and the two attached boats of the Flanders torpedo boat flotilla, "A 40" (Kapitänleutnant Lütjens) and "A 50" (Oberleutnant z. S. Fleischer) turned west for a passing battle and returned fire. The battle, which lasted only a few minutes, was broken off as soon as the minesweeper half-flotilla was secured. A few minutes later, seven enemy aircraft attacked the "V 71", "V 73" and the two A-boats. The English destroyers came out of sight. The enemy squadron commander was fired upon by "V 71" and brought down. The two occupants, two English officers, were taken prisoner.

On the afternoon of October 1, "G 95" (Kapitänleutnant von Eichhorn) and "V 73" (Kapitänleutnant Götting, Friedrich) were on a mine control trip by boats "A 43" (Oberleutnant z. Gebhardt), "A 48" to provide security. (Oberleutnant z. S. Brandt) and "A 49" (Oberleutnant z. S. von Cleve) sailed out. At 5.45 p.m. north of the network barrier, enemy vessels came into sight, which were identified as 1 destroyer leader and 2 destroyers. The enemy opened fire at about 100 hm which was returned by the German boats. ¹³⁸

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The enemy turned across towards our boats, so that they ran off and finally the fire was stopped due to lack of sight.

After aircraft reconnaissance on October 27th observed the departure of the security guard, which on that day consisted of 1 monitor, 1 flotilla leader, 8 destroyers and 2 small vessels, from Dunkirk and the anchoring of another monitor and three destroyers in the roadstead, Torpedo boats of the 6th torpedo boat semi-flotilla, aircraft of the battle group of the Supreme Army Command (Kagohl I) and bomb machines of the sea air station, secured by fighter planes, were scheduled to perform the surveillance. At 3 p.m. "G 91" (Kapitänleutnant Frorath), "S 54" (Kapitänleutnant Scabell) and "S 55" (Kapitänleutnant Ehrlich) left Zeebrugge 3 destroyers sighted in 066 β. While the aircraft prepared for the first attack, the three torpedo boats under the command of the Half-Flotilla Commander of the 6th Torpedo Boat Half-Flotilla (Kapitänleutnant Claussen) approached the enemy at high speed and engaged in ongoing combat from 4:01 to 4:32 p.m. on southwestern courses. The distance was about 90 hm, there was lively firing on both sides. The enemy steered course SW and collected at high speed with 2 monitors and 2 other destroyers. The enemy flotilla leader suddenly turned hard to the west, stayed behind and developed heavy smoke and fog. On the German side it was concluded that a hit had been made. At the second air raid at 4:15 p.m., Kapitänleutnant Claussen with the three boats again on the opponent. All enemy destroyers, firing briskly, disappeared out of range on western courses, the monitors fired unsuccessfully for a while. The firefight was intended to divert the enemy's attention from the planes, which in this way could appear by surprise. The seaplanes had attacked the destroyers to the east with 520 kg bombs, the aircraft of the Kagohl I with a total of 3800 kg). Success was not ascertainable.

At around 2 p.m. on November 1, boats leaving for clearance work sighted 1 monitor and 7 destroyers in 066 β below and were briefly fired upon by the enemy without result. The two security boats "V 70" (Kapitänleutnant Lemelsen) and "V 71" (Oberleutnant z. S. Schmundt) returned fire with the enemy without success.

Similar shootings developed on November 12 and 13. On November 12, the security boats "V 70" (Lemelsen) and "G 91" (Frorath) succeeded in removing the minesweepers, who in some cases had to drag out their detectors, and to occupy the enemy until the departure of the minesweepers was assured. On November 13, "S 54" (Scabell) and "V 71" (Schmundt) engaged in a half-hour firefight over a distance of about 100 hm with an enemy flotilla leader and 4 destroyers, with the result that the clearance work of the A-boats was not impaired.

At 1.30 p.m. on November 15, 039 β was monitored by aircraft.¹³⁹

Battles of the security forces

At the same time, minesweepers working in 037 ß sighted 2 monitors, 6 destroyers and 2 smaller boats. In unusually clear weather, the enemy opened continuous fire at a distance of 250 hm, which forced the minesweeping to be stopped. At a distance of between 150 and 180 hm, "S 55" (Kapitänleutnant Bucher), which was securing together with "S 54" (Scabell), received slight damage to a torpedo tube from explosives. The resumption of minesweeping was thwarted by renewed heavy fire until the Deutschland and Tirpitz batteries were able to open fire at 4 p.m. The enemy then retreated to the north and was reported at 5 p.m. by airmen in 058 ß to be on the move. The 2nd Torpedo Boat Half-Flotilla Flanders then continued their work until dark.

On December 23, around 9 a.m., the torpedo boats "S 55" (Bucher), "G 91" (Frorath) and "V 77" (Kapitänleutnant Herrmann, Franz) spotted and was attacked about 9 destroyers steering northeast at high speed. The opponent turned away, the battle was stopped due to increasing distance.

On January 23, 1918, around noon, while securing the minesweepers, the 1st Z Half-Flotilla sighted enemy naval forces at a distance of 80 hm, including the monitor "Erebus". A firefight ensued, in which the enemy turned to the north-west under fog. The 1st A Half-Flotilla followed and then turned SW to draw off the minesweepers of the enemy who did not follow and came out of sight.

The intervention of the shore batteries always quickly helped push off the security guard. However, the statement by the Commanding Admiral of the Marine Corps proved correct "that it will generally not be possible to drive off the enemy by surface forces of the Marine Corps".

Approach of remote control boats

The limited success of the skirmishes described and the dubious effect of occasional attacks on the perimeter guard by bombers forced other means to be developed and used to combat the monitors. On September 6, the first attempt was made to launch a remote control boat (1) against the security guard. Due to favorable reports, the remote control aircraft took off with the remote control boat of FL platoon II Ostende, accompanied by three single-seater combat aircraft (Lieutenant d. R. Frantz, Vizeflugmeister Spieß, Vizefeldwebel Müller). The remote control boat came 10 nm north-west of Ostend up to about 200 m after a good, smooth run in cloudy weather to attack unexpectedly. The monitor was surrounded by destroyers and surveillance vehicles, he opened fire at 500 m; the first shot was too short, the next one very far, the fifth shot was a direct hit that detonated the remote control boat.

1) See North Sea VI, P. 303 ¹⁴⁰
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Another attempt to deploy a remote control boat was made on October 2nd. The remote control boat of remote control platoon I Zeebrugge was sent to the monitor of the roadblock at around 2:00 a.m., but had to be withdrawn again because of strong enemy counteraction by land planes.

The next remote control boat attack took place on October 28, the day after the scheduled reconnaissance of the perimeter guard by torpedo boats of the 6th Torpedo Boat Half-Flotilla and Bomb machines, At 1:20 p.m. a remote control boat led by St. Ing. d. S. I Vreden set out on the monitor "Erebus" in 058 ß, which was heavily secured by 9 destroyers, 2 barrier steamers and 4 speed boats. After a 25-minute journey, the radiocontrolled aircraft (pilot Flugobermaat Streitberger, observer Vizeflugmeister Kruse) took over the steering of the boat and reached 2:18 p.m. The campground 20 nm northwest of Ostend. At a distance of about 3000 m, "Erebus" and the destroyers, all of whom were marching west, opened up heavy artillery fire on the remote control boat and remote control aircraft. The boat was steered into the destroyer group, steered around behind the monitor and made a sharp port turn at 2:23 to hit the starboard center of the monitor. There was a huge explosion with a large jet of flame, the smoke and column of fire completely enveloping the monitor. Shortly thereafter, a second strong detonation with yellowish-white and persistent smoke was observed near the stern, from which it was concluded that an ammunition chamber had been blown up. The topmast falling overboard was also observed. "Erebus" was out for a long time; its bulge (1) was damaged; it had fulfilled its purpose of protecting the monitor against total loss. The attack, carried out with skill and calm considerations, was an initial success of the FL. weapon under the leadership of Kapitänleutnants Baron von Ketelhodt.

"G 91" (Kapitänleutnants Frorath) and "S 55" (Kapitänleutnants Ehrlich), which were on a patrol on the same day to secure the minesweeping half-flotilla, encountered the perimeter guard at 4:35 p.m. A flotilla leader and two destroyers fired on the minesweeper half-flotilla and the securing boats at a distance of 100 to 120 hm. After the departure of the minesweeper half-flotilla was secured, "G 91" and "S 55" tried to get west-southwest past the security guard to the damaged monitor after 058 \(\mathbb{B} \). The security guard, who fired on the boats from a great distance between 4:50 p.m. and 5:12 p.m., prevented a breakthrough, especially since the security guard received reinforcements from the west. The intention to use bombers on the still buoyant monitor and bring the second FL boat to attack was not feasible due to a lack of readiness of the ordnance in question. "Erebus" was brought to Dover badly damaged.

At 9:40 a.m. on November 3, the Ostend FL boat was launched in the direction of 058 β to a monitor secured by several destroyers. The boat was discovered at a distance of about 5000 m from the enemy. The monitor turned north with extreme force while the destroyers took heavy fire on the FL boat.

	1) Bulge to protect against torpedo attacks. ¹⁴¹
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Insight of the remote control boats

After the radio-controlled boat had come within 50 m of a destroyer, it no longer obeyed by the radio-controlled aircraft. It was apparently damaged by hits on the cable and sank soon after. Following this FL operation, seaplanes and Kagohl I attacked the security guard with a total of 4070 kg of explosive ammunition. The bombs were close to the target, a hit was suspected on a destroyer.

Losses from mines in the security service

In addition to the ongoing security service for the boats of the Flanders torpedo boat flotilla and minesweeping half-flotilla working on the barriers, the boats of the Flanders Z-Flottille and the III. Torpedo boat flotilla carried out patrols that served general reconnaissance and security or specific special tasks. On some of these journeys, torpedo boats were hit by mines.

At 9 p.m. on June 25, the two boats "V 68" (Kapitänleutnant Steiner) and "G 96" (Kapitänleutnant von Puttkamer) set sail to cover two A-boats in 080 β looking for bombardment buoys. At 10:40 p.m. Middelkerke Buoy was reached, the A boats took position about 4 nm WSW Middelkerke Bank. Because of the rainy weather it had gotten dark early and the night was particularly invisible. At 12:22 am (June 26) the stern of the "G 96" traveling behind "V 68" suffered a strong detonation. Section III (officer's mess) and IV (back turbine room) quickly filled up with water) apparently the keel of the boat was buckled, as a result Sections I and II also quickly filled up with water. "V 68" went alongside to take over the crew. "G 96" quickly sank away with its stern; when it moored, the aft torpedo tubes were already in the water. "G 96" sank after about 8 to 10 minutes. Only a small part of the crew was able to climb out because the forecastle was too high out of the water. Most of the crew had to be fished out of the water, 2 non-commissioned officers and 1 man were missing, 1 non-commissioned officer was dead. The wreck lay at 51° 15' N, 2° 38.6' E. "G 96" had run into a mine, although this was also reflected in the search work and later statements about the barriers actually thrown could not be confirmed.

At 5:45 p.m. on August 9, four boats from the Flanders Z-Flotilla set sail to secure the Flanders Torpedo Boat Flotilla clearing mines and nets. "V 67" (Oberleutnant z. S. Hormel) and "V 47" (Oberleutnant z. S. Gerß) provided security in the west. When passing the net, a mine explosion occurred on "V 67" in the forecastle, which leaked Section IX. Personnel losses: 1 man dead, several people slightly wounded. "V 67" was able to come in at 11 nm and was secured by the three other boats the march to Zeebrugge.

On August 17, "V 81" (Kapitänleutnant Ehrlich) was severely damaged by mine hits. "V 81" left Zeebrugge together with "V 73" (Kapitänleutnant Delbrück) at 5:45 p.m. on August 17. 142

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The boats were to secure the minesweeper half-flotilla when clearing individual stranded power units in 038 β . "V 81", which was directly involved in taking over individual net sections and mines, was hit at 8:30 p.m. by the detonation of a net sections mine near the starboard waterline at the leading edge of the bridge. Sections VIII and IX filled up, the loads in Section X leaked. The boat stayed afloat but had to put out a fire because of lack of food water. It was towed in by "V 73" via the stern. Losses were 4 dead and 8 wounded. "V 81" became ready for war again in March 1918.

At 10:02 p.m. on August 21, "S 15" (Oberleutnant z. S. Jacobs), which came in from the protection, arrived at 51° 20.4' N, 2° 48.9' E (square 065 β) in hit a mine in an area hitherto considered unsuspicious. The mine detonated at the stern and completely destroyed the stern up to section II. Sections II and III slowly filled up with water, the boat floated well. The loss was 1 dead, no wounded. "S 15" was towed by "S 24" (Kapitänleutnant z. D. Paschen) and towed to Zeebrugge. "S 15" was decommissioned on September 20th. During the search work carried out over the next few weeks by the minesweeping half-flotilla (Kapitänleutnant Boldemann) numerous mines from barrier No. 87, laid on July 14, 1917, were cleared.

Due to these mine hits, the clearing work was only carried out by the A-boats in the future and the large boats were only used for security. The idea of not using the large boats at all when searching for nets and mines, i.e. letting the A-boats work without backup, was agreed with the F. d. T. Flanders Rejected by the Commanding Admiral of the Marine Corps. The threat of mines to the large T-boats had to be accepted in order not to leave the less powerful A-boats unprotected in the event of surprise attacks.

On November 17, one of the large T-boats was again hit by a mine. "S 54" (Kapitänleutnant Scabell) and "V 71" (Oberleutnant z. S. Schmundt) went north in the morning for early reconnaissance and to secure the 2nd Torpedo Boat Half-Flotilla Flanders while searching for routes. At 8:08 a.m., "A 50" (Oberleutnant z. S. Fleischer) ran into two mines in quick succession to the south-east of buoy 13 (036 β) in very hazy weather, broke in two and sank very quickly. During the rescue work by "A 49" (Oberleutnant z. S. von Cleve), "A 48" (Oberleutnant z. S. Brand) and "A 40" (Oberleutnant z. S. Busse) 16 survivors, including the commander, all wounded, were recovered. 18 men were missing. "V 71" and "S 54" tried to come to the scene of the accident in a wide arc to provide assistance. "S 54" was hit by a mine at 8:16 a.m. after an anchored submarine mine had been spotted alongside by "V 71" shortly before to port under the stern. The boat was no longer manoeuvrable, and there were no casualties. "V 71" took "S 54" in tow and brought it to Zeebrugge. 143

Heavy mine casualties

On September 11, parts of the Z-Flottille Flanders had been transferred home for basic repairs ("V 47", "V 67", "V 68") and to be handed over to the High Seas Fleet ("S 18", "S 24"). In mid-November, "V 47", "V 68", "V 69", "5 61" and "S 64" of the Z Flotilla Flanders were to be transferred from their homeland to Flanders. The boats received instructions from Flanders on November 17th to begin the crossing, but were held up by fighting in the German Bight on November 17th. The march from Heligoland to Flanders began at 10 am on November 22nd, and the boats arrived in Zeebrugge on the morning of November 23rd. To pick up the boats of the Z flotilla off the Flanders coast, the boats "A 60" and "A 61" were put on hold at buoy 14 at 1 a.m. on November 23, following the route indicated to them. About 1.5 nm southwest of buoy 14, "A 60" (Oberleutnant z. S. Eggemann) encountered a mine on starboard amidships. The boat broke apart, the forecastle capsized and sank immediately) and the stern stayed afloat for a short time "A 61" (Oberleutnant z. S. von Rosenberg) at the scene of the accident and rescued, partly through abandoned boats, the commander and 32 survivors, of whom 6 were seriously and 8 slightly wounded. 16 men were missing. The Z-Flottille heading for Flanders had headed for the coast via route 8 and set course from Schouwenbank to 038 β after the report of the mine hit by "A 60" at buoy 14. The march was carried out without incident. Three other boats of the Z-Flottille Flanders arrived in Zeebrugge on December 18, 1917 without incident.

Advances of the torpedo boat forces

Shortly after midnight on September 27, "U 70" (Kapitänleutnant Wunsch) reported that it had hit a mine while the channel was blocked. Aircraft that had taken off to search did not find "U 70". "UC 71" (Oberleutnant z. S. Steindorff) set sail from Zeebrugge at 9 a.m. on September 27 to provide assistance, but due to strong enemy counteraction no contact was made with "U 70". At 4:30 p.m. on September 27, "G 91" (Kapitänleutnant Claussen) and "V 70" (Kapitänleutnant Lemeisen) set sail to pick up the damaged "U 70". The squad advanced to 029 β middle and learned from F. T. that "U 70" had been on the march to 056 β . After no contact was established with "U 70" by 9:30 p.m., the torpedo boat squad returned to Zeebrugge on the orders of the F.d.T.. When FT reported at 10:50 p.m urgently need help", "G 91" and "V 70" left Zeebrugge again. At 1:20 a.m. on September 28, the torpedo boat squad in 030 β l. o. sighted an enemy flotilla leader and 7 destroyers in the moonlight starboard astern and about 100 hm down. Between 1:24 and 1:35 a battle developed with the enemy destroyers at a distance of 70 to 40 hm; the enemy fired at the two boats from the whole line.

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1) See p. 81. 144

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The volleys were in the immediate vicinity of "G 91" and "V 70". The formation of sparks no doubt gave the enemy an excellent starting point for measuring the distance and for deviating the guns. "G 91" was hit in compartment III on the starboard side, which severely damaged the cabin and an officer's cabin, the condenser of the rear engine was leaked by a piece of explosives. The disruption to the battle was quickly eliminated and bright red glow of fire was observed, the enemy ceased fire and fell back. At 1:35 a.m. the engagement was over.

When no radio or optical contact was established with "U 70" by 2:30 a.m. on September 28, the squad returned to Zeebrugge and received the message there that "U 70" had left at 3:45 a.m. 030 β r.u course had been 190°. "G 91" and "V 70" then left again with "S 54" and "S 55" and searched for squares 038 β and 060 β . At 5:42 a.m. the security guard with a lead ship and 7 destroyers came into view. The enemy fired briskly and unsuccessfully at the boats at about 130 km. "V 70" was eventually sighted by Naval Coastal Aviation Department aircraft "1001" at 9:30 a.m. on September 28, but had to dive in front of enemy destroyers and aircraft and remain aground until 6 p.m. The 6th Torpedo Boat Half-Flotilla, which had arrived in the meantime, set sail again at 5 p.m. with the 2nd Torpedo Boat Half-Flotilla Flanders to bring in "U 70". At 6:14 p.m. the maneuverable and now also unable to dive boat was sighted, at 6:40 a.m. being towed by "V 70" and finally taken alongside by "S 55" due to strong yawing and brought to Zeebrugge.

For mid-October the F.d.T. Flanders, to let the operational boats of the Flanders torpedo boat flotilla shell the port facilities and airfields of Dunkirk in good weather. Any guard forces encountered were to be destroyed. The F.d.T. ordered for this night advance that the destroyer half-flotilla of the guard should take up a reception position outside the Dunkirk sands. The execution order was given for the night of October 18-19. The plan of operations had been supplemented orally to the effect that if enemy guards were encountered in Dunkirk Roadstead, they would only be attacked after the land bombardment had been carried out.

At 9.40 p.m. "A 60" (Oberleutnant z. S. Eggemann) with the flotilla commander (Kapitänleutnant Aßmann) on board, "A 61" (Oberleutnant z. S. von Rosenberg), "A 49" (Oberleutnant z. S. von Cleve), "A 48" (Oberleutnant z. S. Brandt), "A 50" (Oberleutnant z. S. Fleischer), "A 58" (Kapitänleutnant Densch), "A 59" (Oberleutnant z. S. Jacobs) from Zeebrugge. The F.d.T (Fregattenkapitän von Stosch) had embarked on the "A 60" to take part in the operation. It was a dark night, WNW 3 to 4, with squalls of rain and hail but lights sighted. Kapitänleutnant Aßmann had divided the A-boats into three groups:

first group: "A 60" and "A 61", second group: "A 49", "A 48" and "A 50", third group: "A 58" and "A 59". 145

Shelling of Dunkirk

Advance via Ostend Stroombank buoy, central east Dyck Flach, Breedtbank to starting position for shelling Dunkirk light buoy 15, shelling course E½S m.w.

At 10:20 p.m., "A 48" and "A 58" collided during a formation transition. "A 58" was damaged on the bow and ran back to Zeebrugge under its own power. "A 59" and "A 48", which had stayed behind as a result of the collision, also started the return march to Zeebrugge at 11:10 p.m., they also started their return march to Zeebrugge, since they had not been able to get in touch with the unit as far as Mariakerke. The operation was carried out with the first and second groups without the "A 48". No enemy forces were encountered on the advance. The Dunkirk roadstead buoys burned, the coast was completely blinded. At 1:26 a.m. several destroyers came into sight south of buoy 15 at about 6 nm; they were not attacked as the start of coastal bombardment was imminent. At 1:30 a.m., fire was opened at a distance of 2800 m against the port facilities (1) as planned. The front gun of "A 60" fired with flares, the other guns with HE shells. The coast was clearly visible in the fire of the flares, the high lighthouse stood out well. The fire from the A-boats was returned by shore batteries and by naval forces lying in the roadstead. Shortly after opening fire, a larger and a smaller guard steamer came into sight to the east of buoy 15 at close range. The A-boats temporarily switched targets to the enemy guard vehicles. At 1:33 a.m., "A 50" fired on the enemy destroyers standing at buoy 15 and thought it had observed several hits. Heavy impacts from land and the fire from the destroyers were in the vicinity of "A 49", "A 50" and "A 61". Several explosions, recognizable by high columns of smoke, were observed in the port facilities on land. Canal systems were hit, one English Barge sunk and one steamer damaged One English soldier killed, 9 others injured No civilian casualties.

At 1:36 a.m., port ahead of the leader's boat, a larger dimmed vessel came into view, which was recognized in the searchlight as a large English monitor - it was the "Terror". The flotilla commander broke off the land bombardment and launched a torpedo attack against "Terror". This received three torpedo hits in quick succession, namely from "A 60" at the level of the gun turret, from "A 61" amidships and from "A 59" in the forecastle. At the same time, the monitor was effectively shelled with artillery. The firing distance was about 250 m "A 50" sighted an enemy submarine just before it approached the monitor, had it fired upon as it passed and thought it had scored a direct hit in the conning tower. When the "A 50" launched the torpedo attack on the monitor, the torpedo went under the enemy amidships. "Terror" was lying with her forecastle deep in the water and at 1:42 a.m. gave the FT signal: "SOS - I am sinking." Due to its excellent underwater protection, however, "Terror' was brought to Dunkirk and later transferred to Dover for repairs.

1) Albert Chatelle: Dunkerque pendant la gu

4. Flanders to January 1918

Three months later, "Terror" returned to Dunkirk.

During the battle with "Terror" the French coastal artillery could not open fire because "Terror" was in the line of fire. The English and French destroyers, small torpedo boats, patrol boats and guard boats in the roadstead had not been able to cause any damage to the A-boats. A pursuit of the A-boats by enemy destroyers did not lead to any result, since in their opinion the destroyers were too far away from the A-boats (1). After the attack, the A-boats rallied and sailed NNE at high speed. A renewal of the attack on the guard forces still lying in the roadstead was refrained from, since all boats had fired their only torpedo. The return march was not carried out through the West Diep, as envisaged in the operational plan, but directly over the Sands to the north. Each boat fired an average of 110 rounds. At 1:50 two large destroyers came into sight abeam to starboard; there was no combat contact. At 4 a.m. the A-boats were back in Zeebrugge. The boats "G 91", "G 95" and "S 55", which set sail on October 18th as planned to secure the A-boats during the shelling of Dunkirk, returned to Zeebrugge on October 19th without any particular incident.

The energetically carried out operation was a great success for the Flanders torpedo boat flotilla under the proven leadership of Kapitänleutnants Aßmann. The flotilla commander had energetically and prudently solved the task assigned to him of bombarding Dunkirk with only four A-boats, and had also skilfully exploited the situation by launching a successful torpedo attack on "Terror" at the right moment.

On December 22, under the leadership of the commander of the Z-Flotilla Flanders (Korvettenkapitän Albrecht), a mining operation was carried out to combat the escort traffic between Holland and England. III. Torpedo Boots Flotilla and Z- Flotilla Flanders carried out the task with 13 boats. For security and reconnaissance, the flotillas were assigned three A-III boats from the 1st Torpedo Boat Half Flotilla Flanders. The boats involved put out to sea at 10 p.m. on December 21 and threw up an angle barrier, which had its apex near the Maas light buoy. 144 mines were thrown at a depth setting of 2 m below mean spring low drought and timed for four weeks. Four days later it became known that three English destroyers had struck mines and sunk on the morning of December 23 in the Hook of Holland area outside territorial waters: the English destroyers Surprise, Tornado and "Torrent" fell victim to this barrier during the escort service on December 23 at 2:55 a.m. At 11:15 p.m. of the same day the destroyer "Valkyrie" also ran into a mine from this barrier, but was towed back to Harwich.

¹⁾ Thomazi, La Guerre Navale dans la zone des Armées du Nord, p. 186. 147

Shelling of Great Yarmouth

On January 14, 1918, at 5:15 p.m., the 14 operational boats of the III. Torpedo Boat Flotilla and Z Flotilla Flanders attacked commercial traffic under the English coast north of the Thames Estuary. According to the information available, the presence of convoys, secured by light enemy forces, on the England-Holland trade route and of guard vehicles on the English east coast was to be expected. If no war or merchant vessels were encountered, Lowestoft and Southwold should be shelled. Although the Commanding Admiral did not rate the military importance of the bombardment of the coast as high, he saw the benefit, apart from the damage to property, in increased surveillance in the sea area concerned and thus in relief in other places.

The boats advanced in three groups:

Group 1, Korvettenkapitän Gautier, with the boats "V 71", "V 73", "G 91", "S 55", "V 70")

Group 2, Korvettenkapitän Albrecht, with the boats "V 47", "V 74", "V 82", "V 69", "S 63")

Group 3, Kapitänleutnant Waitz, with the boats "V 67", "V 68", "G 95" and "S 61".

In the third group, Fregattenkapitän von Stosch, commander of the III. Torpedo Boat Flotilla, at the same time leader of the torpedo boat forces, embarked on "S 61" (1).

Group 1 was to target Lowestoft, Group 3 Southwold, Group 2 to stand up and down off Oxfordness east of the Shipwash lightship. Groups 1 and 3 headed for the coast as planned. No commercial traffic and no enemy war vehicles were encountered on the march. Group 1 was just under the shore just before midnight. A flare fired in the direction of a sighted beacon revealed in the glow land and houses believed to be Lowestoft; in reality the group was further north at Great Yarmouth. The bombardment was carried out in heavy seas; nothing has become known about the effect. On the way back, the boats suffered considerable sea damage, with the front mast of the flotilla boat breaking. An attempt by Admiral Tyrwhitt with the Harwich forces to cut off the German boats failed.

At midnight Group 3 was about 1.5 nm from the coast, which was initially reconnoitered with flares; the town of Southwold was not found. In the glow of the flares, two security vehicles were recognized, turned towards them, lit up their headlights and fired. The steamers came out of sight because in rough seas, wind force SSW 6 to 8, it was difficult to keep them in the searchlight cone and pursuit with the approximate position was not expedient. On the return march, "V 67", Oberleutnant z. S. Hormel, ran into a mine in 036 β Z. 6. The forecastle was torn down to Section VIII, 1 non-commissioned officer, 12 men were missing and 2 men were wounded. "V 67" ran accompanied by "G 95" via the stern, steering into Zeebrugge with its own engine power.

1) Frigattenkapitän von Stosc	ch was appointed	l F.d.T. Flan	ders relieved of
command of III T Flotilla. 148	- 1		

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4. Flanders to January 1918

The work on this new lock, probably on 12/13. Lock 17 laid on December 17, 1917, were tackled by the Torpedo Boat Flotilla Flanders on January 18 and continued over the next few weeks.

Remote reconnaissance

It was of the utmost importance to the Commanding Admiral of the Marine Corps to be kept informed by long-distance reconnaissance about the movements of the warships and especially about the density and form of trade in the sea area from Flanders, Holland, the Hoofden to the English coast. In addition to the ongoing long-distance and close-up reconnaissance by the naval air forces, the reconnaissance image in the sea area mentioned was provided by the combat squadrons of the Supreme Army Command, to which Lieutenant z. S. von Frankenberg and Proschnitz (Ludwig) was assigned, completed when approaching and returning from attacks on England. The assessment of the situation was occasionally supplemented by reports of returning U-boats, which proved particularly useful as a means of long-distance reconnaissance. It had become clear that the shipping traffic between England and Holland was often combined in convoys, which first used the sovereign waters individually, then in the area of the Hook of Holland on one side and at a suitable point on the English coast on the other hand; a fairly clear picture of the handling of other steamer traffic had been gained. In this way, knowledge of the situation was sufficient, if not complete, for the occasional approach of naval and air forces to trade warfare.

Trade War of Naval and Air Forces

On June 14, the three aircraft of II Torpedo Squadron "T 993" (Oberleutnant zur See Wedel — Lieutenant d. R. d. M. A. Krüger), "T 991" (Lieutenant zur See Löwe — Lieutenant zur See Thomsen), "T 992" (Lieutenant for S. Becker - Vizefeuerwerker d. R. Mallmann) as well as for their cover the aircraft "1119" (Lieutenant at sea Scheurlen - Flugobermaat Mensing) and "935" (Flugmaat Hutmacher - Lieutenant for See Zapp) to a company against enemy merchant ships on the east coast of England. 15 nm north-east of Oxfordness (128 α) two steamers were encountered. "T 992" attacked one of the steamers, which was estimated at 3000 Br. RT. The torpedo missed, the speed of the attacked steamer had been underestimated. "T 991" scored a torpedo hit on the other steamer, it was "Kankakee", 3718 Br. R. T., aft of center, which caused the steamer to sink. "T 993" also fired a torpedo at the steamer already attacked by "T 992", which missed because the steamer veered hard. The aircraft were fired upon by the steamers and a submarine destroyer, and the steamers' gun crews came under machine gun fire. 149

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Activity of the Air Force

On July 9, at 1 p.m., "T 993" (Oberleutnant z. S. Wedel — Lieutenant of the R. d. M. A. Krüger) and "T 994" (Lieutenant z. S. Scheurlen — Flugmaat Mensing) started an operation in the direction of the Sunk Lightship. The torpedo planes were accompanied by aircraft "935" (Flugmaat Hutmacher - Lieutenant z. S. Zapp) and "1119" (Flugmaat Neubert - Lieutenant z. S. Boenisch). In good weather — ground visibility was 10 nm, at an altitude of 100 to 200 m there was fog and clouds, the planes fired completely unnoticed at two steamers of 3000 and 5000 Br. R. T. traveling individually. The torpedoes dropped at heights of 6 and 8 m failed due to machine failure.

At 6 p.m., "T 991" (Lieutenant z. S. Löwe - Lieutenant z. S. Thomsen) and "T 992" (Lieutenant z. S. Becker - Vizefeuerwerker Mallmann) took off with the escort aircraft "1283" (Lieutenant for R. d. M. I. Becht - Obermaat Harms) and "1281" (Vizefeldwebel Fritz - Lieutenant d. R. d. M. A. Ehrhardt). East of the Shipwash lightship at 7:45 p.m., in weather similar to noon and a fairly heavy swell, a group of four enemy merchantmen was encountered unescorted, the two largest of which were attacked. Here, too, the torpedoes jumped out of the water several times after the shot and apparently disappeared as a result of a machine failure. The attacked steamers turned their sterns to the departing planes, stopped and opened fire from their stern guns. "T 991" received a hit in its starboard engine. The aircraft had to make an emergency landing and went upside down. "T 992" landed next to it, picked up the occupants and took off again. When the plane was just out of the water, the right float was caught in a sea and knocked off. The plane went down. The two escort aircraft fired red stars to draw the attention of a steamer in the immediate vicinity that was turning towards the accident site. The crews of the two torpedo planes were taken prisoner by the English.

On July 12, three C-machines (1) and a single-seater combat aircraft under the command of Oberleutnant d. R.d.M. A. Christiansen in the late afternoon the sea area Zeebrugge, Nordhinder Lightship, Eastern and Western Scheldt. About 10 nm north of the Schouwenbank (001 ß) a larger Dutch Tjalk was stopped at about 7 p.m. Vizeflugmeister Maukisch went on board as prize officer while two planes flew back to the station to report. Another aircraft then took off for backup and stayed with the prize until it was ensured that it was taken over by the two guard boats "A 40" (Kapitänleutnant Lütjens) and "A 46" (Kapitänleutnant Densch). On July 13 the prize — the Dutch Tjalk "Agida" with window glass to Le Havre — was brought in at Zeebrugge.

Very busy shipping traffic has been observed at Hook of Holland these days. On July 14, a fighter aircraft flew over the eastern steamer strop during morning reconnaissance and at 6 a.m. spotted a convoy near Hoek von Holland, which consisted of numerous tugs with large lighters and was covered by destroyers.

	1) C-machines -	 two-seat airc 	eraft with two	o machine guns	s or one machine	e gun and
F.T. f	or reconnaissance	150		· ·		

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4. Flanders to January 1918

Shortly thereafter, further war vehicles were sighted near Schouwenbank, which seemed to serve as southern cover for the convoy. The same convoy was sighted a little later to the south-west near the Maas lightship by a reconnaissance aircraft. The plane hit the ships with three bombs without observing the effect, as the destroyers opened up heavy and well-placed fire. At 8:15 a.m. the convoy was sighted by other aircraft, a single-seater bomber and a reconnaissance aircraft bombarded it from a height of 1700 m in four attempts with a total of 22 12.5-Kg bombs. The planes believed they had observed flawless hitting effect on destroyers and one of the barges. The ships were also taken under extensive machine gun fire. Due to bad weather, further observations had to be stopped.

At 4:25 a.m. on July 23, two C- machines and one F. T. machine started the trade war. The Dutch steamer "Gelderland", 1150 Br. R. T., was stopped 4 nm from Hoek van Holland by aircraft "1118" (Vizeflugmeister Pantenburg - Lieutenant d. R. Hillger) at 5:15 a.m. The steamer was ordered to stop by machine gun shots in front of the bow, and he complied with this order immediately. The crew had left the steamer, probably assuming that it was a torpedo plane. The examination of the ship's papers was carried out when aircraft "1118", which had meanwhile landed, rolled up to one of the boats. Lieutenant d. R. Hillger went on board as prize officer When a Dutch naval officer came on board, the location was checked together and it was established that "Gelderland" was 1½ nm from the Dutch sovereign border. At 7:15 a.m. the steamer "Gelderland" continued the journey to Schouwenbank (Leukttonne) it was picked up by destroyers sent out by aircraft and taken to Zeebrugge.

At 1 p.m. on July 24, aircraft "T 993" (First Lieutenant z. S. Wedel — Lieutenant d. R. d. M. A Krüger), "T 994" (Lieutenant z. S. Scheurlen — Flugobermaat Mensing) took off in very hazy weather; and "1212" (Flugmeister Rothe and Eggers) to the English coast to lay mines. At 2:05 p.m. in the Black Deep, Long-Sand lightship war position in RW. 42°, distance 7 to 8 nm, three mines were thrown. On approach, the planes were spotted by a minesweeper division stationed at the Black Deep's exit. Since there was a haze immediately above the water when the mine was laid, the mine-laying was probably not observed.

On July 25th, aircraft taking off to guard the Dutch coast stopped a tugboat with a barge off the Hook of Holland 10 nm from the coast. Lieutenant D. R. Hillger established that the barge was carrying out diving work on a sunken merchant ship on behalf of the Dutch government and consequently released the stopped vessel.

At around 10 a.m. on August 7, plane "938" sighted the Dutch fishing boat No. 59 with two Belgian pilots. This fishing boat was suspected of being a spy had lowered sails and was busy with his net. 151

Activity of the Air Force

The observer (Vizeflugmeister Maukisch) went on board as a prize officer to bring the boat to Zeebrugge. Planes "938" and "1281" stayed nearby as backup. Meanwhile the boat turned closer to shore and came close to a Dutch border buoy. In an attempt to land near the vessel and cause the prize officer to anchor, plane "938" overturned. The pilot was taken over by plane "1281". In the meantime, the torpedo boat "V 70" (Kapitänleutnant Lemelsen), which was limited in its maneuverability due to the shallow water, had come up, but could not prevent the Dutch guard steamer "Donau" which had rushed to tow the fishing cutter together with the prize officer and steamed up the sheath. The localization carried out by "V 70" confirmed that the scene of the incident was outside the Dutch sovereign border. The overturned aircraft was brought in by the "V 70".

On September 5, between 6 a.m. and 9:45 a.m., a squadron of aircraft flew over the Zeebrugge, Nordländer, Vmuiden, Maas Boje and Schouwenbank sea area. A Norwegian, a Dutch and a third unknown steamer were sighted northeast of Maas Boje. The latter, trying to enter the territory, was stopped by machine-gun fire but could not be brought in because the sea was too strong to land.

At 1:10 p.m. on September 9, torpedo aircraft "T 995" (Lieutenant z. S. Stinsky — Flugmeister Neuerburg), "T 1211" (Lieutenant z. S. D. N. Schürer — Mertens) and "T 1213" took off. (Hubrich - Lieutenant z. S. d. R. Rowehl) accompanied by three C-planes to the north-west for the trade war. They sighted a convoy half a nautical mile south of Sunk Lightship at 2:50 p.m and a torpedo boat secured. The last steamer was attacked with 3 torpedoes, one of which missed and the other two hit the boiler room and the aft hold. The steamer, "Storm of Guernsey", 440 Br.R.T, sank immediately. The aircraft returned unharmed despite being fired upon by the torpedo boat.

On September 11th at 7:20 p.m. the III. Flotilla and Z-Flottille Flanders led by F. d. T. (Fregattenkapitän von Stosch) to attack the Holland-England route. Apart from fishing vessels, no merchant ship was sighted.

Two mining operations on September 24th and 25th by four torpedo planes each, which were planned after the Black Deep and the Thames, had to be abandoned because of bad weather and damage to the planes' engines. One of the planes made an emergency landing in the Scheldt estuary on September 25 and was towed in by a Dutch torpedo boat. A second plane, intended to effect extradition, landed within Dutch sovereign borders and was also brought in by the Dutch boat.

On the night of October 20-21 and on the night of 13. On November 14th, motor boats were deployed for the trade war in the Hoofden to the Maas lightship for the first time. The motor boats did not see anything during this operation. ¹⁵²

4. Flanders to January 1918

The Flanders Motorboat Division (Kapitänleutnant d. S. II R. Ellendt), which was founded at the end of June 1917 and initially consisted only of motor launches, was replaced on August 10 by six seaworthy motorboats, "L 20" to "L 25", from four of which were armed with a 3.7 cm autocannon and two with torpedoes. Further torpedo boats to reinforce the Motorboots-Division were in the delivery; "L 1" and "L 2" arrived on September 18th. Depending on the weather, the boats, which are very sensitive to rough seas, were also used for patrol duty with the destroyers and for mine duty.

At around 2 p.m. on October 31, "A 59" (Oberleutnant z. S. Jacobs) caught the Dutch fishing cutter "BR 5" off the Western Scheldt on suspicion of espionage and sent it with a prize crew to Zeebrugge for investigation.

On November 22 at 11:30 a.m., the Dutch schooner "Geertje" from Vlissingen was sighted 20 nm south-east of the Nordhinder lightship (150 α) to head south. The schooner obeyed, but the plane had to start the return flight due to lack of fuel; two planes that had started for the transfer could no longer find the schooner because of thick fog that had meanwhile developed.

Due to reports that the England-Holland convoys were sailing and vice versa, surveillance of the trade route began in the early morning of December 11th. Three aircraft of the Zeebrugge squadron met the two convoys consisting of 10 and 11 ships off Lowestoft at around 10 a.m., one coming from England via Outer Gabbard, the other in the direction of Lowestoft. Both groups were accompanied by an airship for security. Airplane "1183" (Oberleutnant d. R. d. M. A. Christiansen — Flugmaat Wladika) immediately attacked the airship and set it ablaze about 400 m away. After barely two minutes, the airship "C 27" fell, engulfed in flames and burned up the water completely. Towards midday another seven planes from the Flemish Air Station I and three large planes launched a bomb attack on the reported England-Holland convoy without hitting it.

Reconnaissance and patrol flights of the Naval Air Force June to December 1917

On June 11, four combat single-seaters start, "1041" (Leutnant d. R. d. M. A. Strang). "787" (Lieutenant d. R. d. M. A. Wachmann). "1044" (Vizeflugmeister Duck). "1047" (Flugobermaat Vurgstoller), the Flanders II sea flight station to reconnoiter the sea area Ostend - Westhinder up to the channel barrier. In 077 ß (southwest of Sandettie), at the request of the Flanders submarine flotilla, an attempt was made to leak the buoys of the channel barrier. Here "1041" overturns, the plane is completely smashed. "1047" lands, Leutnant d. R. d. M. A. Strang tries to start again, but despite several attempts, he can't get out of the water because there is quite a lot of swell when there is no wind. The plane is later picked up by an English outpost steamer and brought to Dover. 153

Reconnaissance flights

On July 7, an artillery plane from the Flanders I seaplane station sighted 2 monitors on a reconnaissance plane. 4 destroyers. 1 torpedo boat and 1 speedboat departing from Dunkirk. The aircraft, which on a monitor thought it had been hit from the rear with a 10 kg bomb, is heavily fired upon and receives a direct hit in the lower left wing deck. It maintains contact until enemy forces veer towards Dunkirk on an opposite course.

On August 12, aircraft "1246" (pilot Flugmaat Paatz - Observer Vizefeldwebel Pütz) was shot down near Westhinder (058 ß) at 7 p.m. during a reconnaissance flight by an enemy aircraft. Both occupants were killed.

On the afternoon of September 10th, enemy naval forces are sighted abeam Ostend. An artillery plane from the Navy Coastal Aviation Department (Lieutenant d.R.d.M.A. Blank — Fliegerobermaat Wolter) took off from the Deutschland Battery at around 4:30 p.m. and established the perimeter guard. At 5:52 p.m. the plane reports for the last time, since then it has been missing and was probably shot down by the security guard. Searches for the missing aircraft conducted by torpedo boats that afternoon and the next morning are unsuccessful.

On September 15, an English Curtis boat was attacked by aircraft from the Flanders I naval base near the Nordhinder light ship over the Zeebrugge sea area with 1,000 rounds of machine gun fire. The enemy defended himself: the battle had to be broken off due to MV interference in two machines and because of the enemy's higher speed.

In the evening of the same day, combat single-seater "1184" (Flugmeister Dauke) east of Westhinder attacks a flying boat coming from the north, which is accompanied by three combat single-seaters. "1184" is fired on by an enemy single-seater and crashes, burning. Flugmeister Dauke finds death.

On October 1st at 3 p.m., a mixed warfare unit headed by Oberleutnant d. R. d. M. A. Christiansen for long-distance reconnaissance and fighter flight in the Zeebrllgge-Nordhinder sea area. At 4 p.m., aircraft "1283" south of Nordhinder (152 a) has to make an emergency landing due to engine failure. "1118" flies back to the station to make a report. Plane "935" stays close to the wrecked "1283" for cover. Meanwhile, aircraft "1183", "1307" and "1280" are reconnaissance in the direction of Nordhinder and to the west. On the return flight they sight and attack a large Curtis flying boat. "1183" and "1307" can follow in terms of speed: "1183" wedges under the swan; of the enemy, "1307" attacks coming from above. After the first machine gun salvos, the enemy loses speed, so that "1280" can also fire. During the pursuit battle, the enemy descends to a height of about 5 m in order to shake off "1183". After about 20 minutes, "1183" (Oberleutnant d. R. d. M. A. Christiansen) manages to put the enemy's left engine out of operation and to force the enemy to land near Outer Gabbard with the last available ammunition. The attempt to land next to the enemy plane is thwarted by machine gun fire from the sinking plane. The wrecked plane "1283" is brought to Zeebrugge.

The day before, the squadron of Oberleutnant d. r.d. M. A. Christiansen was accompanied during reconnaissance by F. T. aircraft "643" of II. T-Staffel. During the landing, this aircraft, which was led by the squadron leader Oberleutnant z. S. Wedel — observer Flugobermaat Golombiowski, crashed. Both occupants die.

On October 15, aircraft "1163" (pilot Flugmaat Treptow. Observer Lieutenant d.R.d.M.I. Hauptvogel) reported that it had been fired upon by a Dutch warship during a reconnaissance flight in front of the Scheldt outside Dutch territorial waters, shrapnel tore off the antenna. A similar Incident, however, without material consequences, occurred on June 7.

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On Oct	tober 31, the com	ıbat aircraft "118	35" accompanyin	g a reconnaissance	e squadron
(Flight Oberma Amsterdam. 154	nat Hutmacher —	Lieutenant z. S	. Zapp) loses con	g a reconnaissance nection due to gro	ound fog near
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4th Flanders to January 1918

The plane has to land due to a lack of fuel - the two occupants who are rescued burn the machine: they are interned in Holland.

During a reconnaissance flight north of Ostend, a land plane from Coastal Artillery Squadron III (Lieutenant d. R. d. M. I. Thaden — Flugmeister Wieöemeyer) was attacked and shot down by five enemy fighter planes at 4:30 p.m. The occupants are missing: despite searches carried out by torpedo boats and airplanes, nothing more of the plane is found or seen.

On December 19th a chain of sea front squadrons in Flanders (Lieutenant z. S. Schweisgut [chain leader]—Flight Master Buhl. Deputy Flight Master Bieder) had carried out a long-range reconnaissance mission to the English Channel. On the return flight he sighted a returning enemy bomb squadron near Den Haan. After being picked up by single-seater fighters at Ostend, the squadron consists of 10 bombers and 6 single-seaters. Lieutenant z. S. Schweisgut launched the attack from an altitude of 4600 m. In the course of the fight, Flugmeister Buhl brings down a burning handlen-page with incendiary ammunition at a distance of 20 m. Shortly afterwards he shoots down another single-engine de Havilland at a distance of 30 m. the opponent falls vertically. The battle takes place in the sea area of Ostend and Nieuvort.

On January 29, 1918, the artillery planes "1159" and "1245" of the Flemish Coastal Aviation Department accompany and secure minesweepers on the mine clearance service. The planes are attacked at 600 m by 4 Sopwith single-seater fighters. Aircraft "1159" (Flugobermatrose Mull - observer Lieutenant Drückhammer) is set on fire. Flugobermatrose Mull brings the aircraft to the water abeam Blankenberghe burning and is taken over by aircraft "1245" uninjured. The killed observer goes down with the plane.

Between June 1, 1917 and January 31, 1918, naval forces of the Flanders Front took part in pleasure raids on enemy naval bases only on September 4. On this day, the II T-Staffel (Oberleutnant z. S. Wedel) starts with four aircraft to Dunkirk. Dunkirk is hit with 2,400 kg of bombs. On the return flight, aircraft "994" has to make an emergency landing near Nieuport Bad and is set on fire. The crew runs the 500 m to the mole under enemy MG fire, swims through the channel under machine gun fire and is picked up by the German posts.

Other attacks on enemy naval bases, primarily on Dunkirk. carried out in large numbers by the combat squadrons (Kagohl) directly subordinate to the Supreme Army Command, in addition to attacks on London and the English east coast.

Mine war

During the first half of 1917 *British mining activity* in the sea area immediately off the coast of Flanders had been very light. Only the Steendiep in front of the Eastern Scheldt was contaminated with 20 shallow mines on February 15, 1917, without any military disadvantages arising from this. In addition, some sea areas in the northern Hoofden and their approach were covered with deep mines against submerged U-boats, namely the sea areas east and south-east of the Downs, north-east of Sandettie Bank and south of Sommet Flat with a total of 1364 mines. In addition, 100 shallow mines had been laid in the sea area off the Thames - about 7 nm north-east of Elbow light buoy. 155

English mining activity off Zeebrugge

The other blocking measures in the first half of 1917 in the southwestern North Sea were related to the blocking and securing of the Dover-Calais road. An intensified mine and net warfare against the Flemish ports did not start again until July 1917. On July 14, 1917, the sea area north of Middelkerke Bank was contaminated with 160 shallow mines, and in July 1917 the sea area between Buiten Ratel and Ostzipfel Smal Bank was blocked by two barriers, each containing 96 mines. On July 25th a major raid was carried out in connection with the appearance of the two groups of monitors, light cruisers, destroyers and steamers. This barrier consisted of a net and 120 mines laid south along the net in the direction of the net. The 12 nm long net was laid in 1½ hours, a remainder was added on July 27th. The exact location of the complete network closure was confirmed on July 28 by aircraft from the Flandem I seaplane station. The total length was 23 nm.

The new barrier was 1 nm west of the old barrier line. Between July 30 and December 31, 1917, 13 more mining operations were carried out in the sea area off Zeebrugge. The contaminated area stretched from the direct approach south of the lightship in Vielingen to the waters between the Eastern and Western Scheldt.

In detail, the following mine contaminations were carried out:

Run	Eng.	date	mine	depth
No.	No.		count	under spring
1,0,	1,0,		0 0 0,110	low tide
1	(87)	7/14/1917	160	1 m
2	(47)	7/25/1917	120	7.3 m
3	(103)	7/1917	96	1.2 m
4	(104)	7/1917	96	1.2 m
5	(57)	7/30/1917	40	1 m
6	(50)	8/12/1917	40	1 m
7	(52)	8/19/1917	40	1 m
8	(58)	8/31/1917	40	1 m
9	(53)	9/22/1917	40	1 m
10	(51)	9/23/1917	40	1 m
11	(94)	9/24/1917	5	1 m
12	(54)	11/5/1917	40	1 m
13	(89)	11/13/1917	4	1 m
14	(92)	11/17/1917	4	1 m
15	(55)	12/6/1917	40	1 m
16	(90)	12/12/1917	5	1 m
17	(32)	12/12-13/1917	196	1 m
18	(30)	1/15/1918	150	?
19	(98)	1/23/1918	5	?156

4. Flanders to January 1918

The minesweeping work was carried out by the Flanders Torpedo Boat Flotilla (Kapitänleutnant Aßmann) and from August 1917 onwards together with the Flanders Minesweeper Half-Fflotilla (Kapitänleutnant z. D. Boldemann), which was put into service on April 10, 1917. As in the German Bight, efforts were made to clear certain exit and entry routes as broadly as possible and to control these and their immediate surroundings with patrols, instead of clearing all the minefields and mine-infested areas found. The early morning hours and late evening hours were generally available to carry out the work on the barriers, i.e. the times of the absence of the English security guard. Occasionally work was also carried out on the barriers during the day in the immediate vicinity of the coastal area and so far away from the barricades that the fire of the barricades guard was ineffective. When the weather was unsightly, the minesweepers also went to the outer sea area and took the chance of being unexpectedly fired upon by the surveillance guards, as was the case e.g. was the case on November 12, 1917. More energetic leadership of the security guard could have damaged the search and clearing work considerably more, but given the great restraint of the English guard forces and in view of the urgent need to keep the paths open for submarine warfare, the methods specified were adhered to. Apart from frequent hindrances due to sea conditions, the search work was limited in time by the fact that work on flat barriers could generally only be carried out at high tide. The tides, which vary greatly in the water levels and are strongly dependent on the wind build-up, mean that flat barriers were occasionally easily recognizable by surface levels, but the next day when the low water level was higher, there were no longer any clues. Faster and more powerful minesweepers would have made it much easier to keep the roads clear.

The blocking of mines and the network, which was carried out with great effort on July 25, was established on the same day. The clearing work started on July 25th. The clearing work on the net was made easier by the fact that the net was provided with accumulator buoys, which were intended to arm the mines woven into the net only after the laying work had been completed. The first thing to do was to defuse the accumulator buoys, so that the net work and the picking up of the net mines were generally safe.

The new contaminations in the west pit were discovered while searching the paths and continuously cleared, sometimes with heavy losses of the Torpedo Boat flotilla Flanders. On August 4th, during a minesweeping half-flotilla inspection trip secured by the 6th Torpedo Boat Half-Flotilla (Kapitänleutnant Claussen), the contaminated area of barrier 5 was identified by 20 to 30 surface stands, of which 15 were immediately shot down by gunfire from the A-boats. The clearing work began the following day. On August 5, 1917, at 8:20 p.m., a mine detonated on "A 42" (1) the turbine stopped and was switched off, Sections I and II were torn open at the top and sides, Section III was filled up to the waterline.

1) Name of commander not ascertainable. 157
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Heavy losses during mine sweeping work

The boat was first towed by "A 40" (Kapitänleutnant Lütjens), later taken alongside and was buoyant at moderate speed. There were no casualties. Shortly thereafter, "A 47" also ran into a mine and was initially "A 39" (Oberleutnant z. S. Ernst) was towed and later by "V 71" (Kapitänleutnant Ulrich) and "A 39". One man was killed, one seriously wounded. The two boats were towed to Zeebrugge without incident. The work had made it possible to determine the approximate extent of the new barrier) further clearance work was carried out without losses.

On August 8th in the evening hours "A 46" (Kapitänleutnant Densch) came with the screw in a submerged net barrier unit during the clearing work on the network barrier and hit a mine with the screw, which detonated despite the defusing of the accumulator buoy and "A 46" badly damaged at the rear. There were no personnel losses. "A 46" was taken in tow by "A 40" (Kapitänleutnant Lütjens) and "A 39" (Oberleutnant z. sea Ernst) and taken in tow by "A 45" (Lieutenant z. S. von Rosenberg) and cut off the stern in brought to the Bruges shipyard.

On September 4, 1917 at 7:35 p.m., "A 45" was also severely damaged by a net mine while clearing the net. The wall of the boiler room on the starboard side was pierced through to the keel, and the boiler was destroyed. 2 men were killed in the boiler room, on deck 3 wounded. The boat remained afloat and was towed into Zeebrugge around midnight. "A 45" had probably touched net mines, the battery buoys of which had accidentally remained unfused.

As a result of these heavy losses, at times there were only two war-ready boats of the Torpedo Boat Half-Flotilla available. It was urgent to call in the Minesweeper Half-Flotilla, which had meanwhile been ready for the front, for inspection trips and clearance work.

In the course of the next few months the Flanders Torpedo Boat Flotilla was filled up to such an extent by A-boats coming from home that it was generally operational with 4 to 5 A-boats in each Half-Flotilla and also had a certain number of reserve boats at its disposal. The Flanders Minesweeper Half-Flotilla was filled to 8 A-boats by the end of September.

By the second half of August, a total of about 12 nm of the newly laid net, including the net mines, had been cleared; of the remainder, which had been defused, smaller pieces that were still standing were rendered harmless over the course of the next few weeks.

On November 14, the Flanders minesweeper Half-Flotilla sighted mines off the western sheath of the four-mine barrier 13 laid on November 13, which were shot down. For the time being, the main area of work remained the west pit, for the exploration of which the flat motor boats of the Flanders Motor Boat Division, supported by aircraft, were successfully used. The buoys 13 and 14 laid out there formed the main pivot of paths 3 and 4 leading through the Westpit and the Schoonevelo to Schouwenbank. It was possible to keep the Westpit clear with these two paths until mid-November. ¹⁵⁸

4. Flanders to January 1918

On November 16, however, mines that had previously remained unnoticed were found south-east of buoy 13. On November 17, during an inspection by the 2nd Torpedo Boat Half-Flotilla Flanders (Kapitänleutnant Lütjens) "A 50" (Oberleutnant z. S. Fleischer) and "S 54" (Kapitänleutnant Scabell) ran into mines in this contaminated area. The mine hit on "A 60" (Oberleutnant z. S. Eggemann) on November 30 led to the discovery of barrier 12, thrown on November 5, 1917. As a result of the very widespread contamination - no mines were initially found in the vicinity of the wreckage of the "A 60" - the possibility remained open that it might not have been a motor torpedo boat attack, especially since members of the crew of "A 60" before and after the detonation claimed to have seen the wake of a speeding vessel and suspicious lights (1). The suspicious area was repeatedly flown over by squadrons from Seeflugstation I and searched for surface conditions; the recognition of surface levels justified the conclusion that at an altitude of about 50 m, paths of about 1000 m width can be searched for surface levels by the aircraft without any problems. Control flights of this type could significantly increase the safety of the search groups controlling the routes if the route in question had previously been searched for surface levels by aircraft at low tide. By mid-December, the contamination areas at buoys 13 and 14 had been cleared.

With the increasing difficulty of the clearing service due to the shallow mines, it was urgent that shallow mine clearing equipment also became available. On December 5th, the I. Mine Sweeping Division (Lieutenant z. S. von Lünen), made available from the Baltic Sea theater of war, was transferred ready for war from Bruges to Blankenberghe. It initially received its berth there. It consisted of an A-boat and 11 motor boats. On November 20, 1917, a fixed bar barrier with a passage gap that could be closed was deployed at the entrance to the pier at Blankenberghe.

The small amount of minesweeping and clearing equipment available to the Marine Corps had so far ensured that U-boats could leave and arrive from the ports of Flanders, but the enemy countermeasures from mines, nets and naval forces had at times been so strong that the General Command an increase in minesweeping A-boats had to penetrate. A number of U-boats had not returned during November for unexplained reasons. It could be assumed with some certainty that several U-boats had fallen victim to the barricades off the coast of Flanders. However, given the great general need for mine clearance equipment, there was a limit to the Marine Corps' justified demands, so that the Admiralty had to reject further requests from the General Command.

¹⁾ While "S 54" remained afloat, "A 50" with 18 dead sank at 51° 33' N. 3° 15' E. L. and "A 60" with 17 dead at 51° 25 N. 3°, 10 E. L. 159

Sustained heavy losses from mines

Opponent considerations

Decisive enemy successes had not been achieved in Flanders either through mine and net warfare or through bombing of bases from sea and air. With these measures, which have so far remained unsuccessful, the means of the English Navy towards the bases of Flanders were more or less exhausted, if one did not want to block the harbor entrances with block ships or follow the suggestion of Prime Minister Lloyd George to use the Grand Fleet to bombard the Flemish ports. As Admiral Jellicoe explains, "it was easy to find a reason for rejecting this proposal (1)". As a last resort, using naval resources against Ostend and Zeebrugge, there was only the immediate blocking of the entrances by blockships. Such attempts, which were more than dubious in terms of their prospects of success, had been considered several times and thought through in detail, but they did not condense into specific proposals until mid-December 1917, after the recapture of Zeebrugge and Ostend from land in the summer and autumn of 1917 had failed.

Since the occupation of the Flemish ports, the English Admiralty had been pushing for a land offensive to cut off the German front from the Belgian coast. Operations of this kind did not begin until the summer of 1917, after larger undertakings along the coast had been forced to give way to the fighting at Verdun and to offensives in France. After the insubordination of French divisions in the spring of 1917 (2), the English offensive in the Flanders sector, which had been planned for a long time by the English supreme commander, Marshal Haig, now also found French approval for major battles on the English front gave reason to hope that the French front, which had been weakened for a long time, would be relieved.

English pressure to eliminate the Flanders ports at all costs had increased considerably since the spring of 1917 as a result of the U-boat successes. A memorandum drafted by Marshal Haig in mid-May 1917 provided for the cleaning of the Belgian coast in two stages. The first section was intended to shorten the front at the Wytschaete bend south of Ypres in order to create more favorable conditions for the main operation. This operation was successfully carried out on June 6th, just as Marshal Halg had received extremely worrying news about the state of the French army, putting the promised French support in the distance. The condition of the French army was such as to hasten Haig's plans. Likewise, disquieting news about Russia's attitude and doubts as to her continued participation in the war made it imperative to attack Flanders as soon and vigorously as possible, in order to achieve the object set before German troops could be brought across from the East.

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¹⁾ Carl John Jellicoe. Erinnerungen Vol. III, Berlin 1938, p. 98. 2) p. 2. 160

Page 146.

4. Flanders until January 1918

Marshal Haig counted on support from the sea for his attack plans and explained in a meeting of his army leaders in the presence of Admiral Bacon: "The general intention to wear down the enemy is also based on the strategic idea of having the Belgian coast in our possession and to lean the English front against the Dutch border (1)." In addition to the direct offensive thrusts against the German front, a surprising landing near Ostend with a simultaneous attack from the direction of Nieuport was planned. Marshal Haig's initiative and his behavior in English Flanders - Offensive were strongly influenced by statements made occasionally at a Council of Ministers in London on June 20, 1917. Haig reported on this in a memorandum marked "Secret" as follows: "Today a very serious and alarming circumstance was discussed. Admiral Jellicoe, First Lord of the Admiralty, reports that the lack of tonnage caused by German submarine warfare would make it impossible for Britain to continue the war into 1918. This news hit like a bomb. Detailed inquiries are being made to verify the facts on which this view of the naval authorities is based. No one shared Jellicoe's conviction, and everyone present seemed to assume that England's food reserves were sufficient. Jellicoe's words were: "It's no use making plans for the coming spring ... we can't go on any longer. .."(2)."

The statements made by Admiral Jellicoe, mentioned by Marshal Haig, were certainly greatly exaggerated, since Admiral Jellicoe had a keen interest in prompt and energetic support from the army. On the other hand, Admiral Jellicoe foresaw the looming dangers to England's supplies quite correctly. However, insofar as he pretended to be able to determine the time of the impending collapse, he fell victim to a misjudgment similar to that of the German Admiralty when it came to predicting the timing of the effects of submarine warfare. The First Sea Lord correctly considered the most unfavorable assumption, because the practical effects of the defensive measures initiated against the U-boat war, in particular the organization of the convoy system, could not yet be assessed, especially since the monthly sinking figures up to April 1917 were still in were in the process of rising. Jellicoe's view was supported by the opinion of Admiral Bacon, who was directly advising Marshal Haig, that Dunkirk must be abandoned as a base if Zeebrugge and Ostend could not be occupied by the beginning of winter.

The English preparations for the Flanders offensive had not gone unnoticed on the German side. The attack on the Wytschaete arch was the first warning sign.

¹⁾ Douglas Carl of Harig, The Marshal's Reports to the Supreme War Council, ed. v. M. Hoffman. 1925. p. 285.

²⁾ Haig. p. 287. 161

Page 147 British attack plans from Flanders postponed

Up to that time there had been very little combat activity on that part of the northern front lying on the coast north of Lombartzyde and occupied by the Marine Corps. On June 19, the Marine Corps discovered that a French division opposite them had been replaced by an English one. Further preparations for attacks were observed during July, and major English attacks on the Yser front were expected by the end of that month. In the meantime, the High Command had ordered the Marine Corps to take the bridgehead position on the eastern bank of the Yser near Nieuport in order to make the expected attack more difficult for the enemy. This operation, the preparation of which had begun at the end of June, was carried out on July 10, camouflaged under the keyword "beach festival". The defenses between the coast and Lombartzyde, which had been taken over by the English, were stormed by parts of the Naval Infantry after preparing to fire and the enemy was thrown back across the river. The combat operations in the land sector were to be supported by naval forces and naval air forces; north-west wind — wind force 7 and the corresponding sea state ruled out the use of weapons, so that the participation of torpedo boats was not possible. For the same reason the activity of the seaplanes and the remote control boat, which was to be deployed on the pier at Nieuport, had to be abandoned.

Marshal Haig's offensive was prevented throughout August by constant rain. Admiral Bacon pressed for the planned landing near Ostend to be completed in the first week of September, a risk that Marshal Haig, considering the small amount of land gained so far, believed he could only take responsibility for if the situation at sea absolutely required a landing. At this point Admiral Bacon no longer saw the situation as threatening as in June: from August 1917 onwards a significant reduction in the sinking results of the German U-boats became noticeable. The time of the landing was postponed until further notice and finally stopped altogether. The English offensive against Flanders came to an end on November 10 after local improvements to the position, without having led to any operational success.

The enemy operations carried out at sea, from the air and from land had not been able to significantly influence the naval warfare from Flanders; the fight against the Zeebrugge and Ostend bases had been in vain, the submarine warfare continued without restrictions.

On January 1, 1918, Admiral Roger Keyes took over command of the Dover Patrol in place of Admiral Bacon. This change of command was preceded by certain differences of opinion about the basic guarding and blocking of the Dover-Calais road against the passage of German U-boats. They revolved mainly around whether or not extensive night-time surveillance of the deep mine barrier laid out between Folkestone and Gris Nez was to be justified. In the Admiralty, Admiral Keyes, as head of antisubmarine warfare, had taken the position that the mine barrier could only be successful if the German U-boats in the area of this barrier were kept under water day and night. ¹⁶²

4. Flanders to January 1918

At night, this required strong and constant lighting of the sea area. In his opinion, the unprotected drifters and guards had to be equipped with lamps until the delivery of special vehicles and, also at the risk of raids, had to be placed in positions along the mine barrier, especially at night. Admiral Bacon held after the bad experiences of 26/27. October 1916 (1) and March 17, 1917 (2) the danger for the unprotected vessels was for too great. When Admiral Keyes took office, the guard was organized according to his plans. From the middle of January the following guard and security forces were normally stationed in the Dover-Calais Strait: 4 older destroyers or P-boats and 2 large minesweeping paddle steamers, all equipped with searchlights and instructed to illuminate the surrounding sea area with searchlights as continuously as possible. These vehicles were spread all the way from Folkestone to Gris Nez. 60 drifters (drift net fishermen), 14 trawlers (fish steamers) and 4 motor launches, all equipped with flares, were distributed in 9 divisions of 6 vessels each over the same sea area. A monitor was set up east of The Varne to support the overall guard. The navigational designation of the area has been improved with light buoys. 6 to 8 flotilla leaders or destroyers divided into two groups were pushed forward to secure the north-east. Apart from the batteries in Forness and North Foreland, the Downs were protected by the monitor "Marshall Ney", armed with 15 cm guns, and the cruiser "Attentive" with a destroyer division. Dunkirk Roadstead was secured by a monitor and destroyer. A destroyer was kept steaming at Dover throughout the night to ferry the commander of the Dover Patrol or the Commander of the Torpedo Boat Force to sea if necessary. During the day the naval forces were reduced to such an extent that passing submarines were forced to dive.

The new type of surveillance was noticed and reported by returning U-boats in early January. On January 15, the F. d.U. Flanders (Korvettenkapitän Bartenbach) states in his war diary: "Fighting against submarines noticeably improved. However, there were no significant disruptions on approaches to Flanders in the past month. Since the command of the new chief of anti-submarine warfare in the English Navy, there has been increased surveillance of the channel blockade. In addition to the two main barricades, a second line of light-barrier destroyer surveillance has been established off Gris Nez over the northern tip of Colbart-Varne past Folkestone Gate. It has not yet been possible to determine whether a new network barriers is also in place here. The passage through the canal is made considerably more difficult, particularly by this searchlight activity. In summary: All of the enemy's measures to reduce the effects of submarine warfare through counteraction at sea did not achieve their goal." In the course of January, however, the difficulties of the Channel passage increased more and more, so that the F. d. U. Flanders, in February, described the passage of the Strait Dover-Calais as the most difficult part of the boats' operation, and attached the greatest importance to combating the new English austerity measures.

l)	North	Sea	٧J	. p.	222	Ħ.
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²⁾ North Sea VI. p. 303 ff. 163

Page 149 Increased English channel security

drive more and more, so that the F. d. U. Flanders in February described the passage of the Strait Dover-Calais as the most difficult part of the boats' operation and attached the greatest importance to combating the new English austerity measures.

Increased English Channel security

5. Attack activity of naval airships

(From June to December 1917)

Apart from operations by individual aircraft, England and in particular the capital London had only been attacked from the air by airships until May 1917. The day after the airship attack on 23./24. May 1917 (1) England was attacked for the first time by a squadron of 21 bombers. These were the flight units under Hauptmann Brandenburg, which were directly subordinate to the Supreme Army Command. This first major attack carried out by daylight on May 25th was followed by others on June 5th and 13th, 1917, also by the Brandenburg bomb squadron. These air raids were of immediate and moral success, and greatly affected Britain's air defenses. The English public again dealt with the question of improved air defenses; this resulted in an increase in aircraft squadrons for local defense. The Commander-in-Chief in Flanders, Sir Douglas Haig, received orders to send one of his aircraft squadrons to an airfield near Canterbury and a second to Calais. The reallocation was carried out on June 21, 1917. The two squadrons were meanwhile transferred back to the Flanders front on July 5 and 6, since no air raids had occurred in England in the 14 days following the transfer. But a few hours after the formations had returned to their airfields in Flanders, on July 7th, 22 German bombers were stationed over London, with the result that on July 10th a Flanders squadron was transferred to Sutton Farm in Essei.

In a memorandum intended for the War Cabinet, the following means were described as essential for improving England's air defenses:

1. The capture of the Belgian coast would be the best defense against air raids by aircraft, since it would force the German planes to fly over enemy or neutral territory. This would mean a major improvement in the alert service.

1)	North Sea	VI. p.	286 ff. 164		

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Page 150 5. Attacks by Navy pleasure ships up to the end of 1917

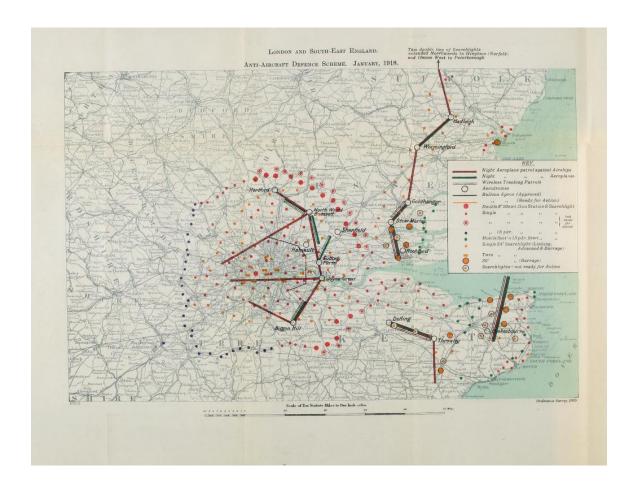
- 2. Another step to damage enemy air service would be attacks on the airfields behind the German western front. This would help the war on land and prevent the enemy from sending all their forces against England.
- 3. A constant patrol service exceeds the human and material forces. The assumption of permanent patrol duty would be in the interests of the enemy, since it would considerably weaken the air war in France. This does not preclude limited patrol duty on both sides of the Channel.
- 4. The question of retaliation by attacking German cities was considered, but shelved for the time being.

The air defenses of London continued to be the subject of lively discussion in the British Cabinet and outside the military for the next few weeks. The reason for this was the repetition of the daylight raids by the Brandenburg bomber squadron at the beginning of July. The material and moral success of the attack carried out on July 7, 1917 had stirred up spirits. Almost 101 British planes had gone up in defense, but the uselessness of unorganized air defense had been clearly demonstrated. Public opinion had found it intolerable that enemy planes came and went over the capital without visible damage, and all in full daylight. A special Cabinet meeting dealt with the matter, a meeting at which, as General Sir William Robertson reports, there was an excitement "as if the world were about to end." command of the land front under Sir Douglas Haig meant an unjustifiable intervention in the fighting in Flanders which was at its height. Finally, the aforementioned dispatch of a combat squadron from Flanders to London was ordered. General Robertson wrote to Sir Douglas Haig two days after the attack that he witnessed the air raid from the windows of the War Office and added: "Our defensive artillery was apparently of no use; our planes appeared singly and were powerless."

The matter was discussed again at a cabinet meeting on July 11. The difficulty always lay in admitting in public that the western front was being weakened in favor of home air defense. The interlocking of the different parts of the Air Force at the front and at home was evident, and it is of historical interest that it was the German daytime raids by Hauptmann Brandenburg's bomber squadrons that laid the basis for the unification of the English Air Force. A committee set up on the basis of the cabinet meeting, headed by Prime Minister Lloyd George and in which Lieutenant General J.C. Smuts did the practical work, stated in a memorandum that a special unified air service had to be created on the basis of experience.

It was decided for London that a ring of anti-aircraft guns extending north, east, and south should be erected and closed to the west as soon as a sufficient number of guns were available. 165

The War at Sea 1914-1918; "The North Sea", Volume VII



Page 151 Airship attack on England South on June 16, 1917

The air raids on London could assume such proportions that the capital became, so to speak, part of the fighting front. The War Cabinet, however, in the face of the demands for the equipment of the London air defense, insisted on a resolution of December 1916 that the delivery of guns for merchant ships must have priority. As a result, 24 guns were pulled out of provincial air cover and 10 from less important locations around London.

After July 7, 1917, there were no more daytime air raids on London, and later raids took place at night, not on bright moonlit nights.

The last airship attack on England on 23/24. After an exchange of views between the Kaiser and the Chief of the Admiralty, May 14 had led to the Kaiser allowing the Chief of the High Seas Fleet further freedom to use the airships to attack England, but with the restriction "when the circumstances were favorable (1)". This favorable situation, rightly demanded by the Kaiser, limited the opportunities for airships to attack England.

On the afternoon of June 16, the airships "L 48", "L 42", "L 44" and "L 45" rose to attack England South. The commander of the naval airship department, Korvettenkapitän Viktor Schütze, had taken the lead on "L 48". After the experiences with British aircraft at Terschelling, the combat aircraft had received orders to stand near Terschelling to protect the returning airships on the morning of June 17th when it got light.

"L 42" (Kapitänleutnant Dietrich, Martin) with 1500 kg of explosives and incendiary ammunition on board had marched towards the Thames via Terschelling. Since there were strong thunderstorms on the Thames, the intended course could not be maintained, and it had to be swung out to the south, in order to gain windward and attack from the Channel. Since several thunderstorms were avoided and the headwinds freshened up, the attack on London was abandoned given the short time of night. Kapitänleutnant Dietrich decided to attack Dover. During the attack at 2:00 a.m. to 2:30 a.m., the ship was shot at extremely hard, but because of the heavy haze, the searchlights could only hold the airship for a very short time. A whole quarter of houses with ammunition stores was completely in flames. According to English statements, "L 42" crossed the coast at N. Foreland at about 3 o'clock and bombed Ramsgate, Manston and Garlinge. The third bomb fell on a naval ammunition dump near the clock tower in Ramsgate, causing extensive military damage. ¹⁶⁶

l) North Sea	VI, p. 290.
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The War at Sea 1914-1918; "The North Sea", Volume VII



Page 152 5. Attack activity by naval airships up to the end of 1917

The black paint on the underside of the airship made it difficult for the searchlights to hold onto it, as the English side expressly stated in this case.

Many aircraft had taken off, after "L 42" no other aircraft was observed during the attack itself, apart from one aircraft standing under the airship. Shortly after the attack, "L 42" was also pursued and heavily fired upon by light forces, apparently torpedo boats and light cruisers. The battle lasted 3/4 of an hour It turned out to be an airship. It was "L 48"; 500 m above it, an airplane was clearly observed. — The landing took place without further incident around 9 a.m. on June 17. "L 42" spent 14 hours over 4000 m during this 19-hour journey, including 11 hours over 5000 m.

"L 44" (Kapitänleutnant Stabbert) had been fired upon by guard vehicles south of Harwich and after two bombs were dropped due to the failure of two engines and strong vibrations in the rear nacelle, which later also led to the failure of the two engines in the rear nacelle, the attack had to be carried out give up. The lighting was very bright and it didn't get quite dark, so no further attacks were carried out.

"L 45" (Kapitänleutnant Kölle) also had engine failures and finally only two engines were available. Under these circumstances, no target could be reached, the airship returned without any particular results.

"L 48" (Kapitänleutnant Eichler), with Korvettenkapitän Viktor Schütze on board, crossed the coast south of Oxford Ness at around 3 a.m. on June 17. "L 48" attempted to attack Hauwich, was pushed back by heavy gunfire according to British sources and took a northeasterly direction Course. The airship was at an altitude of about 6000 m and was easy to see. At 3:28 a.m. "L 48" near Theberton was attacked by two planes at the same time and set on fire. The airship slowly fell burning into a field at Holly Tree Farm Commander, Kapitänleutnant Eichler, and his courageous crew died except for Lieutenant z. S. Otto Mieth and the engineer's mates Ellerkamp and Uecker. Kapitänleutnant Eichler jumped out of the burning ship with 4 crew members and was killed in the process. The English official work on the air war by H. A. Jones says on this occasion: "The bravery and perseverance of the commander and his crew who, in spite of engine trouble, and clear visibility which favoured the defense, endourvered to fulfill their orders and gave their lives in the attempt." (1).

Before the next airship attack against England was scheduled, the Chief of the General Staff of the Field Army applied to the Chief of the Admiralty to stop naval airship construction.

1) A.	H.	Jones,	The	war ii	n the	air:	Vol.	V.	Page	33-34	167
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Page 153 Basic considerations about airship construction

The letter from the Chief of the General Staff of July 27 justified this request with the fact that, as a result of the extraordinary increase in enemy air forces, for which England and the United States were making every effort, everything had to be deployed to be prepared for this danger by the spring of 1918. A substantial increase in the aircraft program was deemed necessary, for which the necessary raw materials could only be obtained if the Navy ceased airship construction. No other sources were available to provide aluminum.

In a letter dated August 2, the Chief of the Admiralty took the following position: "The naval airships are absolutely necessary to secure the minesweeping and clearing work as long as no large aircraft are available. Their use is therefore particularly in the interest of submarine warfare. The airships are also an indispensable part of the High Seas Forces for all major operations of the Fleet. Here, too, there is an interest in submarine warfare, in order to carry out advances with light forces to damage enemy merchant shipping traffic. Airships are indispensable for the Baltic Sea to assist in minesweeping and to escort the supply of ore. The Navy therefore cannot do without airships."

However, because of the serious situation described by the Chief of the General Staff, the Chief of the Admiralty offered the following measures: Reduction of the total budget for airships from 29 to 25. After filling this budget with 25 airships, i.e. around the end of September 1917, only replacement constructions for airship failures are commissioned, and based on experience this would be one ship per month. Airship construction is only necessary at one point if this measure is adopted.

The Chief of the High Seas Forces commented on this on August 10 as follows:

- 1. Airplanes cannot replace airships.
- 2. For reconnaissance and security service of the fleet, if attacks on England are avoided, 18 airships and ½ airship per month as a replacement are needed.
- 3. Attacks on southern England could be dispensed with insofar as this area is within the attack range of the army bomb squadrons. Abandoning the Central and North attacks, on the other hand, would mean that the entire war industry there, including shipyards, could work undisturbed and that the means of defense established up to that point would become free. Attacks therefore remain urgently needed, and in order to carry them out, 18 airships and 1 replacement building per month are needed for the fleet.

The Chief of the High Seas Forces agreed with the Chief of the Admiralty that the overall budget would be reduced at the expense of the High Seas Fleet and that this budget would be replenished by one ship per month.

The Kaiser's decision recognized the need for the expansion of the air force demanded by the Chief of the General Staff and stated that the High Seas Chief should generally only maintain airships for reconnaissance purposes. ¹⁶⁸

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Page 154 5. Attack activity of naval airships up to the end of 1917

According to the imperial decision, the budget was set at 18 airships and the allowance of 5 replacements per month, a level which should under no circumstances be exceeded.

The Commander of the Naval Airships [F.d.L.], Korvettenkapitän Strasser, issued orders of fundamental importance for the next attacks. It was ordered that the "North" attack should include all targets north of the 54th parallel, "South" the 23rd parallel and "Central" between the 53rd and 54th parallels. Main targets in the north: Firth of Forth, Edinburgh, Glasgow, Tyne Estuary, Tee Estuary;

South: London, Birmingham, Bristol;

Centre: Manchester, Liverpool, Humber Estuary.

For the August attacks, the preferred location was Central, since the nights were still a bit short for North and South was in the area of the army's combat squadrons for some reason could not reach an altitude of 5500 m to attack had to turn back.

On August 21, the "Attack Center" command "L 35", "L 41", "L 42", "L 44", "L 45", "L 46", "L 47", "L 51" was promoted to "L 46" under the leadership of the F. d. L.

"L 35" (Kapitänleutnant Ehrlich, Herbert) had risen at 1 p.m., had set course from Norderney to the Humber, but had finally been pushed north by strong snow gusts, so that the airship only slowly approached the coast due to a strong headwind. Approaching the coast, "L 35" was searched for by searchlights of the outpost forces and fired on without effect. As targets on the coast could not be reached before dawn, at 2:15 am on August 22, when dusk was already setting, they turned around and attacked the numerous outpost forces sighted on the march. These made themselves recognizable by searchlights and artillery fire, just like when they were approaching. A total of 1184 kg of bombs were thrown, the impact of which, as far as could be observed, was on target. According to the English statement, the attack was unsuccessful. Withdrawal and landing without incident.

"L 41" (Hauptmann Manger) had risen at 12:45 p.m. with ten 50 kg, five 100 kg, one 300 kg high-explosive bombs and 20 incendiary bombs. After a good position and wind determination had been possible at Terschelling, several thunderstorms had to be avoided. The coast north of the Humber Estuary was crossed just after midnight. The airship was illuminated by searchlights and heavily fired upon by batteries at 12:50 am Hauptmann Manger assumed he was standing over Hull and from 12:50 am to 1:25 am dropped 1627 kg Bombs were dropped from a height of 5400 m. Fires and destruction were observed and the streets of a town were clearly recognizable on a clear day. Captain Manger had the impression that the powerful searchlights and modern anti-aircraft guns had been taken away. 169

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Airmen were not identified with certainty because none of the 20 planes that took off had come close enough to "L 41" and reached the necessary altitude. Return and landing without incident.

"L 42" (Kapitänleutnant Dietrich), which had risen at 12:35 p.m. and had two 300 kg, four 100 kg, ten 50 kg explosives and 8 incendiary bombs and 6 flares on board, began its attack on Grimsby, since he did not see the coast until late and the wind had freshened up considerably. From 12:35 a.m. to 2:35 a.m. on August 22, a searchlight complex was headed for, but this could not be reached due to the strong headwind. From 2 a.m. to 2:15 a.m. a firing battery was covered with 700 kg of ammunition. It was not possible to determine the location of the battery with certainty, and success was not observed. At 2.45 a.m., Kapitänleutnant Dietrich called off the attack as hopeless because of the increasing light. During the retreat, "L 42" was fired upon several times by naval forces, otherwise no special events.

"L 44" (Kapitänleutnant Stabbert) with two 300 kg, three 100 kg and seventeen 50 kg explosive bombs rose at 1:22 p.m. and set course for the Wash. At 10:20 p.m. the English coast south of the Humber was passed. Via central England There was a broken cloud cover At 11 p.m. Lincoln was reached with favorable position determination, searchlight stands sighted there, whose searchlights shone straight and immobile in the air, were not attacked, since their behavior gave the impression as if they were only intended to cause airships to deploy their bombs on unimportant terrain. "L 44" therefore dropped highly visible flares, which were mistaken for larger industrial plants, with its entire bomb supply. "L 44" also reported that according to its impression the gun material had been removed from the non-military points. According to English reports, the locations where the bombs were dropped could not be determined. It seems doubtful whether the attack actually took place near Lincoln. March back and landing, which occurred at 8:20 a.m., without incident.

"L 45" (Kapitänleutnant Kölle) with 1500 Kg high-explosive and 10 incendiary bombs had risen at 1 p.m. The approach was carried out with the intention of attacking Hull from the north-west. From 8:30 p.m. many lights, some of them very bright, were sighted on the water, at 12:45 a.m. several searchlights came into view ahead, and 10 minutes later the airship was first intermittently, then heavily fired upon. However, it was not possible to find and arrest the airship with the searchlights. When no land was in sight by 1:45 a.m., was desisted from the intended attack on Hull or Grimsby, as the advancing time and imprecise location no longer gave certainty of execution by daylight. The naval forces, which had been firing at the airship for nearly an hour, were thought a worthwhile target and attacked with all ammunition from 1:50 to 2:10 a.m. No effect could be observed due to haze and darkness. Retreat and landing, which took place at 9:40 am, without incident.

Kapitänleutnant Hottender took off with "L 46" at 1:42 p.m. From the island of Zuist the airship set course for the Wash with the intention of reaching Sheffield or, if possible, Manchester. ¹⁷⁰

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At 10:35 p.m. the coast was crossed over the Humber Estuary at an altitude of 5700 m and Grimsby, which was clearly visible, was run over. It was steered further inland and at 00:40 a larger town came into view on port ahead, which immediately disappeared again through clouds. When looking through it was found that the ship was making little speed. The F.T. bearings from Bruges gave no picture. "L 46" therefore turned around with the intention of heading for Grimsby. In the meantime the compass had frozen and could no longer be read. When at 1:15 a.m. a small illuminated complex and behind it a larger, long city came into view in a hole in the clouds, four 50 kg high-explosive bombs were dropped and a flare showed that there was no target between the two locations. From 1:35 a.m. to 1:50 a.m. 1900 kg of explosive ammunition were dropped and a good explosive effect was recognized. The defense was only by slight, several batteries seemed to be firing according to the sound. According to later findings, it can be assumed that the place of attack was the town of Louth. March back and landing at 7 o'clock without further incident.

"L 47" (Kapitänleutnant von Freudenreich) had risen at 12:33 p.m., had taken a course via Borkum in order to cross the English coast to the north or south of the Humber and to advance to the industrial towns of the "Centre". The coast came into sight at 11:30 p.m. in the Grimsby area. The planned advance into the interior had to be abandoned because the airship had been subjected to a considerable load when passing through a layer of cloud and an inclination of 8 to 10° was required to maintain the altitude of 5800 m. In this position the airship obeyed the rudder very poorly and lost a lot of speed. At an altitude of 5800 m, the wind WNW force 6 to 7 was estimated. From 1:30 to 1:45 a.m. a town believed to be Grimsby was therefore bombed with a total of 1400 kg of explosives and 40 kg of incendiary bombs. Several searchlights and guns were stationed in the south-west of the city, and the defenses went into action immediately, but without effect. The searchlights could not capture the ship because of the haze, the guns fired erratically. Which place was actually attacked remains doubtful. As it departed, the airship was ineffectively fired upon from a great distance by naval forces stationed to the south. Withdrew and landed at 7:45 a.m. on August 22 without further incident.

"L 51" (Kapitänleutnant Dose) gave up the attack shortly before midnight on August 21 because its compass had failed due to freezing and thickening of the compass fluid and the F. T. - Soundings did not result in sufficient location.

The attack on 21./22. August had clearly shown that the airships at high altitudes were well protected against all kinds of defenses, but that made recognizing objects to be attacked and direct orientation difficult, and that this significantly reduced the effectiveness of attacks from great heights. The moral impact was greatly diminished by the fact that some of the airships were neither seen nor heard, and the bombs were dropped in places where they were ineffective and unnoticed.

The next airship attack against England took place on the night of September 24-25, 1917. ¹⁷¹

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The airships "L 35", "L 41", "L 42", "L 44", "L 46", "L 47", "L 50", "L 51", "L 53", "L 55"; took part; the Commander of the Airships, Korvettenkapitän Strasser, on "L 46". The "L 52" (Oberleutnant z. S. Friemel), which was also deployed, had to leave before reaching the English coast due to failure of the FT transmitter and the front engine give up the attack. The order to attack was: England center or north.

"L 42" (Kapitänleutnant Dietrich) took off shortly after noon on September 24. The airship flew at a low altitude for as long as possible in order to avoid the strong headwinds expected at higher altitudes. At 3:00 am on September 25, however, it had not yet been possible to reach a searchlight complex on the Humber that had been in sight since 11:00 pm.. The attack had to be broken off at 3:20 a.m. On the march back we were Outpost forces in front of the Humber were bombed with 500 kg; no effect was discernible. Several times planes were observed under the airship near the English coast, although Kapitänleutnant Dietrich had not noticed that he had been attacked. In fact, an English plane had that had previously tried in vain to reach another sighted airship, an attack against "L 42" was planned. The plane standing under the airship fired on the airship from a distance of a few 100 m. "L 42" found two bullet holes in one of its gas cells after its return. The landing took place at 12:45 p.m. on September 25 without further incident.

"L 47" (Kapitänleutnant von Freudenreich) had risen at noon on September 24 with the intention of crossing the coast north of the Humber. From midnight until around 3 a.m. the ship was heavily fired upon by numerous naval forces and had to leave early go to high altitude, about 5800 m. Due to the strong headwind, the ship hardly made any progress, although without being endangered by the shelling at the high altitude. Attacks against the naval forces, which were carried out between 2:40 a.m. and 3:15 a.m., were unsuccessful. At 3:15 a.m. the attack was abandoned and the retreat began, during which the airship was fired upon by naval forces for a short time without success at 4 a.m. The landing took place at 8:40 a.m. without further incident.

According to their observations, the other airships have crossed the coast and come under attack.

"L 35" (Kapitänleutnant Ehrlich) took off at 1:40 p.m. with 1500 kg of droppable ammunition. The airship had set course for the Humber Estuary and had flown at low altitude until dark in order to be able to attack in time in any case. The approach proceeded without incident. It had been worth driving at low altitude, about 2000 m; a deep, mostly dense cloud cover had come to the aid of the commander's endeavour. The coast was crossed at 11 p.m. between Wash and Humber and the vessel sailed overland on a SW course until 3.40 a.m. Virtually no defenses were encountered on the march, some weak searchlights failed to pin the ship. 172

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Orientation was easy with the clear weather and bright city lights. It was driven to 5100 m (16,000 ft) and only went to higher altitudes during and after the attack. When the extensive industrial complexes south of Doncaster were reached at 2:55 a.m., the airship was only slightly ahead. In order to be able to leave the coast in time, Sheffield had to be abandoned. The attack was now launched at the industrial facilities that had been reached, which had not been screened out until shortly before the attack; Blast furnaces and railway systems stood out well. All of the ammunition was dropped in a well-aimed manner, approaching from the north. In the English view, namely Parkgate Iron and Steel Works and Silverwoor Mine north of Rotherham, the last-minute blinding hampered the success of the particularly daring attack. The actual damage is said to have been minor. A searchlight battery came into action soon after the attack began, the searchlights failed to pin down the ship, and the fired incendiary shells missed well behind the target.

At 3:15 a.m. the vessel sailed downwind on a course east and the coast was crossed at 3:40 a.m. without incident. On the return march, "L 35" received fire from heavy and medium calibers at dawn, which could be recognized by the strong and frequent muzzle flash. "L 35" climbed to an altitude of 5800 m and turned away so that the shelling had no effect. When the shelling ships stood aft, numerous cruisers and destroyers could be seen through the haze. At 5:30 a.m., vessels were again sighted that were mistaken for our own minesweepers and were asked for their location. However, the vehicles began firing from small calibers to no avail. Landing took place around 9 a.m. The experienced and energetic commander had done his utmost to carry out an effective attack within the framework of the given order. However, the chances of success from great heights were slim.

"L 41" (Hauptmann Manger) took off with 1300 kg of ammunition - five 100 kg, ten 50 kg high-explosive and 20 incendiary bombs - at 12:30 p.m. on September 24. The airship headed straight for the English coast from Norderney. He managed to make good progress at low altitudes; from 10:30 p.m. he went to altitudes of over 4500 m. "L 41" then came at about wind force 6 to 7 due to a tilt of 5 to 9°, which was caused by unfavorable temperature, and due to the low engine effect still with 12 nm, i.e. almost half forward as before. The coast was therefore not passed until 1:40 a.m. and from 2:35 a.m. the entire ammunition was dropped on Hull; according to the English statement the damage was minor. The orientation was very good. It was so clear over the city that it was easily recognizable with the individual docks. Batteries and searchlights appeared only after some of the bombs were dropped, the shells were all under the ship. An aircraft not noticed by "L 41" tried to attack the airship and pursued it to the coast in vain. After the skillfully conducted attack course, the retreat and landing took place without further incidents. Landed on September 25 at 10:36 a.m. 173

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"L 44" (Kapitänleutnant Stabbert) set course for the Humber with two 300 kg, three 100 kg, seventeen 50 kg and three incendiary bombs after the ascent at around 1 p.m.. At 1 a.m. the distinct coast south of the Humber Estuary was crossed. Due to strong headwinds and the ship's bank, Hull could not be reached in time. The Commander therefore decided to drop all munitions on industrial sites on the Humber south-east of Grimsby. The sites were brightly lit; the airship, from which eight searchlights could be seen, was not illuminated and fired at only a little. Return and landing at 10:14 a.m. without further incidents. According to British information, "L 44" was not observed over England.

"L 46" (Kapitänleutnant Hollender), with the commander of the airships on board, rose at 1 p.m. on September 24. Altitudes below 3000 m were flown until after sunset. At 11:30 p.m. "L 46" crossed the English coast to the south Grimsby. At an altitude of 5500 m, the airship hardly made any headway against the very strong westerly wind; at times the aft engines failed and the aircraft was inclined at an angle of 10 to 12°. From 11:45 p.m. to 2:35 a.m. maneuvered to attack a town believed to be Grimsby; the town was initially brightly lit and gradually dimmed. From 2:35 to 2:45 a.m. 1,800 kg of highexplosive bombs were dropped, the impact of which could be clearly observed in some of the houses. According to the English statement, it was a place south of Grimsby. The observed light was from a Royal Flying Corps airfield. Artillery defense was poor. On the return march "L 46" was fired upon by naval forces in the Humber estuary. At 3 o'clock the coast was crossed at Spurn Point. Return and landing at 9:15 o'clock without incident.

"L 50" (Kapitänleutnant Schwonder) crossed the English coast at 11:20 p.m. after climbing at around 1:00 p.m. There were two explosive bombs weighing 300 kg, eight of 100 kg, fourteen of 50 kg and five incendiary bombs. At 10:30 p.m. the F.T. transmitter went out; as a result, the attack on targets further inland was abandoned and Scarborough was chosen as the target. At 11:20 p.m. Scarborough was bombed with high-explosive and incendiary bombs. Over the town lay an almost complete cloud cover, through which only the occasional light shimmered. Three or four searchlights searched the airship in vain. Some guns opened weak fire in the direction of the ship, apparently only from the sound of the propeller. On the return march, the rest of the bombs were dropped over Bridlington with no visible success and no detected counter-effect. Whether the Commander's claim to have attacked Scarborough and Bridlington, based on correct observation based appears doubtful. According to the English statement, no attack on these towns was observed. In this, as in other cases, the bombs, which were dropped from great heights and therefore unobserved, are said to have fallen in areas outside the cities. Withdrawal and landing, which took place at 9 am, without incident. 174

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"L 51" (Kapitänleutnant Dose) took off at 12:25 p.m. with 1,820 kg of high-explosive bombs and 90 kg of incendiary bombs. This airship also marched for the first few hours at altitudes below 3,000 m, but the failure of the port side engine resulted in a loss of speed. The English coast was therefore not available until 2:15 am on September 25. The commander believed he was near Whithernsea. From 2:25 am to 2:45 am the ship was fired on several times as it approached the coast. As the time for an attack continued Inland, the batteries were approached, but they stopped firing and dazzled as soon as the airship approached, so the commander had no choice but to use part of his bomb load on lights near the batteries. Retreat and landing at 9 a.m. without further incident.

"L 53" (Kapitänleutnant d. R. Prölß) took off at 12 o'clock on September 24 with the intention of attacking Sheffield. Ammunition carried 3000 kg of bombs. After spending five hours at altitudes below 3000 m in weak WNW winds higher altitudes were sought around 7 p.m. The weather, which was somewhat cloudy at first, changed the further the ship came to the west. It became completely clear and cloudless, there was a fine layer of mist on the water. The winds increased in strength at higher altitudes. The coast was crossed much further south than intended in the Boston area rather than at Spurn Point at 1 a.m. As it was too late to attack Sheffield, Grimsby or Hull, part of the bombing was on Boston, part dropped on barracks north-west of Boston. Strong artillery defenses near the camps, but the ship was unable to reach them. According to British observations, there were no attacks on Boston and the surrounding area r city. When crossing the coast on the return march, "L 53" was fired upon by beach batteries without result. Return march and landing at 7:20 a.m. without any particular events.

"L 55" (Kapitänleutnant Flemming) took off at noon on September 24 with the intention of attacking Kingston upon Hull. At midnight the airship crossed the English coast north of Spurn Point with low cloud cover and a good view. According to English statements, it read "L 55" considerably further north at Bridlington. Kapitänleutnant Flemming launched his attack at 1:45 a.m. at what he believed to be Kingston. The airship was caught by a very powerful searchlight directly below the ship and fired at with artillery. In this position, a 300 kg. and dropped six 50 kg bombs. After turning to port, the airship was illuminated by a second searchlight of equal power and was well fixed and brightly lit by both searchlights. The bombardment by several batteries was very lively. The rest of the ammunition, three 300 kg, fourteen 50 kg and 20 incendiary bombs, were then dropped. After this all counteraction ceased. The return march on an easterly course was started. According to English sources, "L 55" was illuminated by searchlights at Skinningrove, the black paintwork on the underside of the airship making it difficult for the searchlights to track, and fired on from the batteries at Skinningrove.

Fly and airship attack on England

While the airship was being illuminated, an aircraft tried to attack, but was unable to reach "L 55" due to the high altitude and the strong westerly wind. The airship had not noticed the aircraft. According to British observations, the second bomb was dropped near Staithes carried out and the bombs thrown in. Withdrawal and landing at 9 o'clock without incident.

On the same night that the last air raid took place, planes from the Brandenburg bomb squadron had just attacked southern England and London. This air raid was followed by five more by October 1st, which had a significant effect on London and southern England. The defenses had not shown themselves to be able to cope with the attack by aircraft, and despite the considerable reinforcement of the gun belt around London, the ineffectiveness of the anti-aircraft defenses came close to creating panic in London. Systematic investigations in the Woolwich arsenal had shown that the production of ammunition decreased considerably on the nights of the attack and the days that followed. The air defenses in and around London and the method of barrage resulted in an exceptionally high consumption of ammunition, which would soon exceed the service life of the guns and bring the artillery defenses to a standstill in a relatively short time if a constant replacement of the guns was not organized became. At a Cabinet meeting on October 2nd it was stated that some of the guns were already unusable and that if the attacks continued at the pace of the past week London's air defenses would be destroyed in a few months. In this emergency, when the air raids seemed to be having a greater effect than the somewhat diminishing effect of the German U-boats, the Cabinet decided to surrender 16 guns from those earmarked for arming merchant ships and 22 from the naval reserve for the air defense of London. Also 8 aircraft were withdrawn from the coast for air protection and were lost to anti-submarine warfare, where, according to the British, they had developed useful activity (1).

On the night of October 19-20, 1917, the last airship attack against England in 1917 took place. The attack was marked by exceptional weather conditions in the higher air layers, which made this attack journey take a very unfavorable course after the attacks had been carried out and led to the loss of five airships. The order to attack was: Center attack. Participants "L 41", "L 42", "L 44", "L 45", "L 46", "L 47", "L 49", "L 50", "L 51", "L 52", "L53", "L54", "L55".

"L 42" and "L 51" could not leave their halls because of cross winds and therefore could not take part in the attack. The leader of the airships, Commander Strasser, was in charge in Ahlhorn. South-westerly winds prevailed east of Terschelling over the North Sea, which gradually turned further north over the west as the airships advanced westward.

1) In the course of 1917, six more air raids were carried out against Eng	land. 176
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Page 162 5. Attack activity by naval airships up to the end of 1917

The F.d. L. had pointed out to the commanders at the meeting that the invasion was not to be carried out further south than Humber, for example, because otherwise it would probably no longer be possible to approach the industrial area from the south. Above 3000 m, the northerly wind forces increased approximately twice and from 6000 m onwards, stormy north and north-west winds prevailed. Since measurements at higher altitudes, which Ostende was able to carry out, were not reported in this case, the high wind speeds at high altitudes were not taken into account.

"L 41" (Hauptmann Manger) took off at 12:30 p.m. with one 300 kg, five 100 kg, ten 50 kg explosives and 20 incendiary bombs. The airship immediately cleared the clouds and parked at Norderney in 2900 "L 41" reached the English coast at Spurn Point at 7.45 p.m., but relaxed a little to avoid Hull drift south and found the Humber Estuary and Grimsby beneath the airship. The airship was fired upon by batteries here. Oriented towards Humber and Hull, the commander thought he was heading for Sheffield. According to British information, however, he was further south near Derby and carried out his bombing raid at 11:50 p.m. west of Birmingham. Hauptmann Manger believed to have attacked Manchester. Defense was not available apart from a few searchlights; these only lit up when the ship had already dropped the ammunition.

After the observations over land, the commander had realized that the airship was making very little speed with a 60° lead and was being transferred to the south. In order to first get free from the coast, the commander left ENE and finally steer E-course. He believed to have crossed the coast in the Harwich area at 3:30 am, when in fact the airship had left the east Kent coast. "L 41" was repeatedly fired at on the coast with the most modern means of defense, powerful searchlights, incendiary grenades, rockets and flares. When "L 41" had descended to 2600 m after overcoming the coast, it was heavily fired at by several warships, so that "L 41" had to go up again to get out of the firing zone. An attempt to make headway at an altitude of 5000 m on a N and NE course was again in vain, the ship made speed over the stern. "L 41" took off therefore again an E course and drifted towards the land front in Flanders, which was passed at about 06:30; the airship was fired upon by artillery. Because of the danger from planes, the Marine Corps was asked to take on the planes. Shortly before 8 a.m. a German aircraft appeared south of Brussels and escorted the airship until it was seen to be clear of the front. The landing after this attack run, which was carried out with remarkable skill by Hauptmann Manger, took place at 3 p.m.

"L 46" (Kapitänleutnant Hollender) rose at 1:20 p.m. and marched on course Humber estuary with the intention of attacking the industrial area. First, at higher altitudes of up to 4500 m, weak westerly winds were slowly turning to the right with altitude, so that the attack center a very favorable weather development was expected. 177

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At 7 p.m. the wind began to turn strongly to the right and freshened considerably. The airship was drifting slowly towards the South Wash and was on the coast north of Norwich at about 11:20 pm. Taking into account the unfavorable weather development and assuming that the wind would change even further, the commander gave up the invasion of the interior and at 11:30 p.m. occupied Norwich, which could be clearly identified, with all the ammunition. According to British information, "L 46" was just under the coast north of Norwich when the bomb was dropped, which was abandoned south of Harmouth 20 minutes after the bomb was dropped. 1800 kg of explosive ammunition had been dropped returned via Holland. The landing took place at 1 p.m. on October 20.

After climbing at 12.15 p.m., "L 47" (Kapitänleutnant von Freudenreich) crossed the English coast at 8:30 p.m. at an altitude of 3800 m south of Flamborough Head. At the higher altitudes that had now been reached, the commander realized that the airship was drifting strongly to the south. He then A bomb attack on Nottingham was not observed, and it was not possible to determine where the bombs dropped by "L 47" fell. In the meantime the compass had failed. During the retreat, heavy searchlight activity and low artillery activity was observed in the industrial area. At 11:40 p.m. "L 47" crossed the coast south of Ipswich, after the rest of the ammunition had been dropped at a facility near Ipswich. Here and at sea the defense was very lively. "L 47" succeeded because of temporary if three engines failed to carry out the return march clear of the coast, the airship remained for a short time at about 800 m above Dutch territory, where it was illuminated and fired on over Helder. After the engines cleared, "L 47" made faster progress and cleared the coast. Landing took place at 12:40 p.m. after the attack run, which was skillfully carried out with great difficulty.

"L 52" (Oberleutnant z. S. Friemel) took off at 1:30 p.m. and generally carried out the approach to the English coast at altitudes of up to 4000 m. "L 52" crossed the English coast north of the Wash at an altitude of 5000 m. Over land it was found that the ship was hardly making any headway and that the northerly wind had therefore freshened up considerably. The attack on the industrial towns was abandoned and an E course was taken with the intention of attacking Norwich and one of the south-eastern coastal towns. At around 11 p.m., several searchlights came into view on the starboard side, which were controlled and attacked. During the attack, after numerous other searchlights were illuminated, it was determined that the airship was in the east searchlight belt of London. The city itself came into view out of the haze, but could not be reached because of the wind position of the ship. From 11:15 p.m. to 11:30 p.m. the defenses of London were bombed with all the ammunition dropped; Observations of the effect were not possible. 178

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According to British information, the bombs were dropped near Hertford and Waltham Marshes. An attempt by an English pilot to attack "L 52" failed because of the high altitude of the airship.

Although the airship descended to 4000 m after leaving the coast, the Belgian coast could no longer be reached. At 1 a.m. "L 52" was standing abeam of Boulogne, from where it was being heavily shelled. Since it no longer seemed possible to break free from the Channel, the commander decided to cross the battle front in the interior of the country. At 3 a.m. on October 20th he thought he was crossing the front line at a very busy spot north of Soisson. The airship then descended, assuming it was over German territory, but was heavily shelled at 4:20 a.m. and 5:20 a.m. The last bombardment must have taken place roughly south-east in the Verdun area. At 7 a.m. the Rhine valley was recognized and the exact orientation found again near Worms. From here the march back took place without any particular incident. The landing took place at 3:40 p.m.

"L 53" (Kapitänleutnant d.R. Prölß) rose at 12:15 p.m., carrying 3000 kg of bombs. The route was chosen via Heligoland in order not to be sighted by the Dutch islands. At the beginning of the journey, westerly winds were steady up to high altitudes It was intended to cross the English coast about 10 pm. However, by 8 pm it was found that the coast had already been reached, owing to freshening easterly winds. A broken cloud cover lay over England, permitting a view down but blocking the ship from view. According to a bearing received at 8:30 p.m., "L 53" was near Cambridge. The commander saw from this that the wind was blowing from the north at high altitudes. This strong drift was confirmed when passing lights. At 9:30 p.m. the commander sighted a large city in a gap in the clouds, which he addressed as Birmingham and bombed with 2000 kg. Searchlights came on, the muzzle flashes of some guns were seen, the gap was quickly crossed.

According to English information, "L 53" passed the coast at Blakeney in north Norfolk shortly before 8 p.m. and flew over Norfolk, Suffolk, Essex, the Thames Estuary and Kent.

Around 10:30 p.m., a larger area came into view again, over which Kapitänleutnant Prölß dropped the rest of the bombs, 1,000 kg. Suddenly an extraordinarily heavy shelling started, at least 25 to 30 searchlights could be seen through the cloud cover, but they were not able to penetrate the clouds. The commander believed he was now over London, especially since the airship was being fired upon heavily and continuously; the detonation points were low and astern. On the coast, the commander tried to orientate himself after the fire from N. Foreland came into view. "L 53" crossed the coast near Dover and headed for Ostend. The airship was also constantly under heavy fire near Dover. "L 53" was still being drifted heavily to the south. An engine had failed, the speed was low, and because of the drift to the south, getting home seemed almost hopeless. However, the experienced commander managed to reach Belgian and German territory at an altitude of 3000 m using cloud cover. 179

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The airship was shot at each time it broke through the cloud cover for orientation. "L. 53" landed at 3 p.m. on October 20.

"L 54" (Kapitänleutnant Freiherr von Buttlar) had risen at 12:50 p.m. and had reached the English coast at 8:30 p.m. Kapitänleutnant von Buttlar had stood south of the Humber after his position while crossing the coast and given up the intention of attacking Sheffield and Manchester because of the strong north wind that he had encountered. He launched the attack at 9:50 pm on Derby and Nottingham. The effect in the city believed to be Derby could not be observed under a light layer of haze. In Nottingham the effect seemed good. In both places the Defense started with the dropping of the first bomb, but was ineffective against the airship standing at an altitude of 6100 to 6500 m.

According to English information, "L 54" was more southerly and had crossed the coast at Happisborough on the north coast of Norfolk, crossing Norfolk in a southerly direction immediately along the coast and left the coast near Clacton-on-Sea.

After leaving the coast, Kapitänleutnant von Buttlar reduced his altitude and in this way got clear of the Dutch coast with sufficient reserve. Landing took place at 9:40 a.m.

"L 55" (Kapitänleutnant Flemming) took off at 12:45 p.m. on October 19 and crossed the English coast north of the Humber Estuary at around 9 p.m. after the airship had been fired upon by outpost forces. During the overland advance, the blinding of towns and villages was observed. At 9:25 p.m Well-marked targets, thought to be Mappleton and Kingston, were therefore attacked with 1,300 and 3,000 lb bombs from 18,000 ft. English reports attribute bombings detected at Holme, south of Peterborough, and between Hitchin and Hatfield, that airship "L 55" did not observe any artillery counteraction, searchlights searching individually did not find the airship. At 10:50 p.m., "L 55" noticed a very large city that was dimmed, which the commander took for Sheffield from his navigation. The rest of the ammunition, 1000 kg, was dropped here from a height of 6300 m.

After feedback on the further course of the journey, Kapitänleutnant Flemming believed that he had not attacked Sheffield but Birmingham. During the return march over dense cloud cover on an ENE course, the airship was drifted sharply to the south and, with the cloud cover dissolved, quickly approached a strong flash of projectiles in a southerly direction. As the airship approached, the defense increased and it was correctly recognized that the barrage was from London. The airship drove slowly towards London on a northerly course with all engines at maximum power; sustained, extremely violent fire was detected. Powerful searchlights were visible outside the borough, blinding the city even within the barrage belt. North of London, two night landing sites for planes could be identified fairly easily. As the airship was drifting towards the north-west corner of London, it turned west. 180

Page 166 5. Attack activity by naval airships up to the end of 1917

Taking advantage of the cloud cover, the airship cruised at altitudes between 3000 and 3500 m in anticipation of weaker winds. At 03:20 the front engine finally failed; both rear engines were shut down due to valve burnout. This rendered the F.T. transmitter unusable. All secret things that were not necessary for the further journey were torn up and thrown overboard because the return was doubtful.

At 4 a.m. on October 20, the airship came under lively fire. The Commander thought he was in the Dover area. According to English information, he left the coast at Hastings. As soon as it got light, "L 55" went to 6000 m and observed a long line of flares on the starboard side in an approximately north-south direction. At 7.30 a.m. the Scheldt estuary was identified. At 8:40 a.m. two biplanes were sighted in the north under dense cloud cover and then climbed to an altitude of 7,300 m. The planes came out of sight. At 5:25 p.m. the airship landed near Werra due to a lack of fuel, fog and falling darkness. The airship received damage on landing and had previously also been hit by projectiles. "L 55" was scrapped.

"L 44" (Kapitänleutnant Stabbert) took off at noon on October 19, crossed the English coast from the Wash at 8:30 p.m. and set a southerly course towards Peterborough and Bedfort. There, military installations that had not dimmed were attacked with ten 50 kg bombs, which fell between Elstow and Kempston, according to British sources. More bombs were dropped near Leighton Buzzard. "L 44" passed not far from London, which remained stranded to the south. Some bombs were dropped near Maidstone in Kent, left the coast at Folkestone at 12:30 am; 20 minutes later "L 44" was over Boulogne and was being driven by the strong south-east drift across France, where it fell at 7.15 am on the 20th October came under French defensive fire near St. Clement. When first sighted, "L 44" had a height of about 3,500 m, climbed rapidly to about 5,800 m and was set on fire by a projectile there. The tried and tested commander died with his brave crew.

"L 45" (Kapitänleutnant Kölle, Waldemar) reached the English coast north of the Humber at 9:20 p.m. on October 19, crossing Lincolnshire and Northampton in a long cross-country flight. In the first part of the overland trip, "L 45" repeatedly avoided English aircraft, near Leicester it encountered an aircraft at around 11 p.m. that "L 45" shot at in vain and which the airship was able to avoid. At 11.30 pm, Kapitänleutnant Kölle attacked the town of Northampton (English statement), believing to be further west and having attacked Oxford. "L 45" then followed the railway line to London and attacked London. Significant property damage was done in Hendon, Hampstead, Camberwell and Lewisham. The relatively long time that elapsed after the audience had been warned of the attack had tempted many people to go outside again. The main damage was caused by the dropping of a 300 kg bomb in Camberwell, 3 department stores were destroyed and around 200 houses damaged, 10 people killed and 23 wounded. ¹⁸¹

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Another 300 kg bomb exploded at Hither green, killing 14 people and injuring 7; 26 houses were damaged.

Shortly after 1 a.m., "L 45" in turn was subjected to an air raid, gaining altitude quickly. "L 45" left the coast at Hastings and crossed France at high altitude. At 9 a.m. the airship crossed Lyon, heading NE with the intention of making an emergency landing in Switzerland. In the meantime three engines had failed, which is why the airship could not move forward against the strong wind. "L 45" crashed in the Saone valley. The airship was destroyed by fire by the crew, the commander and crew were taken prisoner by the French. The crew was severely affected by the flight at high altitude; the extraordinary efforts may have partly influenced the fate of this airship.

"L 49" (Kapitänleutnant Gayer, Hans) was early on the English coast, so that he first stood up and down until complete darkness fell. As a result, "L 49" crossed the coast more south than he thought, namely at Holkham in north Norfolk and not, as Kapitänleutnant Gayer supposed, at Scarborough. "L 49" dropped bombs on various sites in Norfolk. By midnight "L 49" was hovering over Folkestone, which was clearly visible but was taken to be the Dutch coast. At 9 o'clock "L 49", which had drifted far into France, was forced to land by five attacking French Nieuport aircraft. The attempt to set the airship on fire failed, as did the destruction of the airship. The completely exhausted crew was taken prisoner by the French.

"L 50" (Kapitänleutnant Schwonder) was already at 9 p.m. at an altitude of 5,800 m over England. Radio telegraphy and two engines had failed. The commander dropped all the bombs and initially thought he was attacking Hull and Grimsby. Because the defenses were very strong Kapitänleutnant Schwonder also reckoned with the possibility of having attacked London. According to the British account, the bombing took place in open country. "L 50" was driven south by the stormy wind. The next morning at 6 o'clock land was sighted through a Nolken Gap, which was taken for Holland. There was heavy shelling from below, during which an airship, probably "L 44", which was driving next to "L 50", was caught and brought down in flames. "L 50" continued to fly at an altitude of 2000 m for about an hour and then descended to 250 m for orientation. The front gondola was badly damaged during a landing attempt. 16 men, including the commander, jumped out of the ship, the lightened vehicle rising again; 4 men were left in it. As the airship drifted over the Saone near Slsteron, it was observed by the crew of "L 45", who had meanwhile been taken prisoner. "L 50" drifted off over the Mediterranean Sea and was observed there by French seaplanes until nightfall. Nothing more was seen of "L 50" from this point in time. Kapitänleutnant Schwonder and 15 men were taken prisoner of war. 182

Page 168 5. Attack activity by naval airships up to the end of 1917

The attack on the night of October 19-20 had inflicted the heavy loss of five airships on the Luftwaffe. Only a few airships, including the particularly skilful "L 53" (Kapitänleutnant d. R. Prölß) and "L 54" (Kapitänleutnant von Buttlar), had succeeded in avoiding the combat fronts and Dutch territory. The commanders had recognized the strong north wind from ground visibility over England and received confirmation of the strong north wind from FT bearings. However, the spirit of aggression did not allow most of the commanders to immediately recognize the full danger, because otherwise the return could have been ensured by giving up the attack even if one engine failed. Fregattenkapitän Strasser, who directed the attack from Ahlhorn, had refrained from F.T. warning because the airships must have recognized the situation earlier and he did not want to burden the already very heavy F.T. traffic uselessly. In Ahlhorn, the strong southern displacement was only recognizable from the FT bearings, i.e. after the effect had taken effect. The report of the F.d.L., Fregattenkapitän Strasser, to the Fleet Commander lets the circumstances that are responsible for the losses of the offensive voyage on 19./20. October 1917 were the cause.

Of major influence was the lack of adequate measurement of wind height, which would have been possible from Ostend. The great importance of these high-altitude wind measurements had appeared on previous occasions. An early October from F. d. L.'s statement that such measurements could be of decisive importance for the fate of airships had unfortunately now been confirmed. The particularly favorable overall weather situation in no way forced the attack to be stopped; However, if the airships had known the wind conditions in the higher layers of the air in good time, they could have prevented drifting southwards by stopping earlier. Lost quarter and half hours played a decisive role in wind forces such as prevailed at high altitudes on the night of October 19/20. Although the F.T. bearings were not error-free, they were sufficient on the whole to let the commanders recognize the situation. In addition, just as the airship situation became dangerous, around midnight, other FT traffic began to become restless and brought uncertainty to the determination of the FT kits, although the rest of the armed forces generally maintained FT silence. The F.T. traffic in the service of the airship company had put the management in a position to satisfy the really important needs of the airships, despite the difficult conditions. Navigation had been exceptionally significant and difficult for the return march. Those airships that once stood south of the 52nd parallel were in a threatening position. If the airships were too far ahead, they made too little speed to the east to have left the English coast by daybreak. According to F. d. L. initially have to keep east without considering southward displacement and in cases of heavy enemy fire may even have to leave the firing range on a southerly course without considering loss to windward. Engine failures also resulted in a severe loss of windward. The drop in engine power at high altitudes had contributed to loss of speed and increased difficulty. 183

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Loss of five naval airships

The losses that occurred on this night of the attack are in no way attributable to the British air defenses, but only to the special weather conditions. It can be assumed that the exertion of the long high-altitude journeys and the altitude sickness had an impact on the crews.

Soon after this attack, OHL approached the Navy with a request to conduct airship attacks on St. Petersburg. The Chief of the Admiralty recommended that the OHL carry out these attacks with large aircraft instead of with airships and stated in an immediate lecture on October 25, 1917 that the airship construction program should not be changed in spite of the large failure in the night from October 19th to 20th. Nine large airships were still available for North Sea warfare and four new airships were to be expected by the end of January 1918. These 13 airships were deemed sufficient to carry out the tasks remaining to the airships. The Kaiser also took this opportunity to emphasize that he must regard the airship attacks on England as an exceptional use of the weapon under the safest, most favorable conditions.

Up until the end of 1917, the weather in the North Sea was very unfavorable, stormy winds blew for long periods of time, and it was often foggy and invisible. Although the execution of attacks on England took precedence over the air reconnaissance, which was ordered in principle for the day trips after November 17, 1917, there were no more attack trips by naval airships against England by the end of 1917. An attack on England planned for November 12, 1917 with five airships was canceled due to weather conditions. On December 12, 1917, the five naval airships that had been deployed turned back as ordered because of the strong wind, after they had advanced to Dogger Bank. 184

6. The Naval War from the German Bay (January 1, 1918 to April 30, 1918)

General situation

The fighting of 1917 on the land fronts had taken a favorable turn for naval warfare in the North Sea. Efforts directed against the naval bases in Flanders had remained unsuccessful. The long-running battles in the East, in which parts of the Fleet had finally also taken part successfully, had come to an end which had practically eliminated Russia as an opponent at sea and on land.

The submarine war initially exceeded the promised sinking numbers, but later it seemed to have kept them. However, a recognizable effect of the fight against the tonnage of merchant ships serving the enemy did not yet appear. At the turn of the year 1917/18, there was no foreseeable point in time when the enemy alliance would finally be defeated using the means of naval warfare.

At the turn of the year 1917/18, the strategic situation in the naval theater of the North Sea was not considered fundamentally changed by any leading authority in the Navy. The trade war against England was still the focus of all operations. The main role here fell to the submarines. The Fleet remained the indispensable means of securing and, if necessary, fighting for naval supremacy in the North Sea to such an extent that safe entry and exit routes were created for the U-boats and the minesweeping and clearance units active here were guaranteed safe support. A significant weakening of the fleet was believed to be irresponsible at the time, so that the participation of the surface forces of the Fleet in direct combating of trade had to be limited to operations of a smaller scale or to those involving the entire Fleet. The latter, too, must not carry too great a risk; they had to prepare themselves and try to avoid more serious setbacks. The main goal of sinking merchant tonnage, which was considered decisive for the outcome of the war, could not be jeopardized by serious losses within the High Seas Fleet.

Since August 1917, a decrease in the tonnage destroyed by U-boats had become apparent; Numerically, however, the military results of the submarine war still met expectations, apparently even exceeded them. ¹⁸⁵

Priority of submarine warfare

In good faith in the sinking results, which were based to a certain extent on estimates, the High Seas Chief and Commanding Admiral of the Marine Corps, as well as the Chief of the Admiralty Staff who assessed the overall situation, had no doubts about the ultimate success of the path taken with the declaration of unrestricted submarine warfare on February 1, 1917. The disappointment that spread in some places outside the Navy about the lack of political successes in the U-boat trade war was not shared by the Navy authorities mentioned.

The sinking numbers of merchant ship tonnage estimated by the Admiralty and assumed to be correct actually gave no reason for a change in the overall assessment of the strategic naval situation. After the end of the first year of unrestricted U-boat warfare, the Chief of the Admiralty had reported to the Kaiser with full conviction that, based on the current state of affairs, decisive effects of the U-boat war in 1918 could be expected. In addition to the military and economic effects of the loss of tonnage, the commitment of a large part of the light armed forces, very high material and personnel consumption, especially of gun crews for merchant ships and the convoy service as an impact on the naval war, was emphasized. The Chief of the Admiralty also considered significant influences on land warfare to be present. In his view, from February to the end of December 1917 the following had been sunk: 27 troop transport steamers and 565 ships with war material, including 97 with ammunition and other finished war supplies; only in finished ammunition, only as far as recognized, the one-month requirement of about 148 divisions of 15,000 men in normal combat activity and of about 25 divisions for longer large-scale battles. Apart from certain influences on the Macedonian and Syrian fronts, it was stated that the military aid of the United States could not assume a decisive extent because of the lack of shipping space (1). The Chief of the Naval Staff summed it up as follows:

"The importance of submarine warfare increases the moment the decision turns to the western front. It is an independent means of war working parallel to land warfare. He remains the indispensable reserve in case the land war in the West should not bring the full decision. It works cumulatively in progression with the disorders already achieved. The closer we get to the decision, the more compelling the need to drive him becomes."

On February 1, 1918, the Kaiser noted these overall results with interest and satisfaction. The Kaiser, like the Chief of the Admiralty, was just as little able to recognize that the enemy had managed to tip the scales in his favor—the longer the more so—by organizing his defenses and by building new merchant ships, and that the result was not inconsiderable behind the estimated one had stayed behind.

1) Arno Spina	aler comes later to	more cautious	formulations:	The trade	war with
submarines. Vol. IV	(reprint Hamburg 1	1964), p. 512 f	ff. ¹⁸⁶		

Page 172 6. Naval War from the German Bight to April 1918

On April 8, 1918, on the occasion of a lecture by the Chief of the Navy Cabinet, the Kaiser confirmed his view of the tasks of the naval forces by ordering for the near future:

"Sharp implementation of submarine warfare as the main task; Support of the western front from the Channel with the means of small warfare basically by Marine Corps with help from High Seas Forces as far as possible. The Fleet should not be used in the Hoofden."

At the beginning of 1918, the Admiralty had given detailed consideration to the possibility of supporting the Western Front with naval forces from the High Seas Fleet and the Commanding Admiral of the Marine Corps, and as soon as the aim of the western offensive became clear, they had drawn up guidelines in agreement with the High Seas Command and the Marine Corps. A bombardment of the disembarkation ports in the Channel by heavy forces of the High Seas Fleet should not be an option, since the expected success did not justify the use of the ships. "Their deployment would also mean deploying the entire Fleet under unfavorable circumstances. Under the current conditions, where entry and exit routes are only to be expected in the northern part of the German Bight, it must be avoided that the fleet is able to to accept the Battle of the Hoofden." Advances by the High Seas Forces had to comply with the directives given by the Kaiser, with advances in a northerly direction expected to have an after-effect on the English distribution of forces and thus on the conduct of the war in the Channel. The influence must be all the greater if we should ever succeed in achieving greater success." U-boat operations from Flanders were primarily intended to immediately disrupt increased transports of troops in the English Channel. It was assumed that during the fighting in the West not only would there be increased troop movements between France and England, but that the movement of ships overseas—Britain—France would also increase and be of greater importance for the feeding of the troops and the supply of war material. Even if in the U-boat trade war the principle applied that U-boats should be deployed where they could sink a maximum of commercial shipping space with a minimum of risk, this principle should be temporarily postponed in view of the importance of English supplies to France and a number of 3 to 4 submarines of the Marine Corps with torpedo armament on the particularly difficult area of operation in the eastern channel, mine submarines are primarily used on the transport ports. The use of mines, even those with a timer, was forbidden on the transport routes themselves, out of consideration for one's own submarines. The fleet's submarines were also to be temporarily involved to a small extent in the direct combating of transport traffic in the channel. Night torpedo boat forays into the Eastern Channel to disrupt transport traffic were said to be desirable and should be carried out under particularly favorable circumstances, taking into account the increased guard and the short nights. 187

Page 173 Opportunities to support the western offensive?

Successes were also expected from air raids on the disembarkation ports.

Practically speaking, the implementation of these guidelines gave little reason to expect any major successes. A submarine approach against certain categories of steamers contradicted the nature of this naval warfare tool. The minor successes to be expected against certain transport movements were offset by a greater threat to U-boats and a reduction in the tonnage sunk. The approach of large-scale surface forces from the Flemish bases was not promising given the great superiority of the enemy, at least not of decisive influence. The accommodation of an increased number of torpedo boats (1) or possibly of light cruisers in Zeebrugge and Bruges encountered difficulties even in the opinion of the Commanding Admiral of the Marine Corps. So there was little opportunity to support the western offensive with Marine Corps naval forces. Advances by the High Seas Fleet within the framework of the guidelines in force hitherto suggested a certain relief for naval warfare in the Channel area and thus an indirect influence on land warfare operations in the West; there was no doubt in the minds of the Naval Operations Staff and the Front that such naval advances were only secondary tasks at the time, seen in the context of the overall operations of the naval war.

If the previous course of unrestricted submarine warfare had not resulted in any fundamental change in the situation and intentions for the future on the German side, at the same time the enemy had seen a significant relaxation in the loss of merchant ship tonnage since August 1917. With the recognition of the mortal danger, all forces to defend against the submarines were mobilized under the leadership of the British Admiralty. With the greatest exertion of all naval weapons, the formation of a convoy and the direct engagement of the U-boats had achieved a measurable result. The advantages of the convoy system over submarines had come to light. Within the access of German surface forces, especially those of the High Seas Fleet, the same system had had consequences that at the beginning of 1918 led to a fragmentation of the English Great Fleet and thus to a fundamentally changed attitude with regard to the possibility of a naval battle. With the decision to avoid a fight against the High Seas Fleet and thus to avoid the possibility of direct damage to the assembled German main forces, the need to block ports and outlet routes by all means became even more evident than before. A tightening of the mine blockade of the German Bight of the North Sea was from now on directed not only against the U-boats, but also against any possibility of the High Seas Fleet sailing out. In addition to the mine warfare, plans for the immediate blockade of German bases came more to the fore.

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¹⁾ At the beginning of January 1918, 20 destroyers and about 20 small torpedo boats (A-Boats) were stationed in Flanders. ¹⁸⁸

Page 174 6. Naval War from the German Bight to April 1918

The activity of the High Seas Fleet from January 1, 1918 to the end of April 1918

The U-boat war was and remained the centerpiece of the naval war against England: no authority in the navy had any doubts about it. As a result, the main tasks of the High Seas Fleet at the beginning of 1918 remained the same as before, even beyond the period of the decisive fighting in the west: securing the entry and exit routes and supporting the U-boats by directly approaching surface forces to destroy cargo space. Airships and naval air forces had to participate directly or indirectly in these tasks.

The urgent need to strengthen the high seas forces for the continuation of the submarine warfare by supplying naval forces, in particular small warfare resources, crews and defense means of all kinds, had hitherto only been inadequately met with regard to the security tasks in the Baltic Sea. The collapse of Russia made it possible to a small extent to exploit the newly created situation in the Baltic Sea in favor of the North Sea theater of war:

The cruiser "Straßburg", which had to undergo basic repairs by the end of March, arrived in the North Sea on April 8, 1918 after being assigned to the IV Scouting Group. In addition, the 15th and 16th Torpedo Boat Half-Flotilla came under the command of the High Seas Fleet, a move that took place at the 16th Torpedo Boat Half -Flotilla in mid-May, in the case of the 15th Torpedo Boat Half Flotilla only had an effect on service in the North Sea from August 1, 1918, because the boats had to be thoroughly overhauled and initially had to be used for special tasks in the Baltic Sea. After mid-December 1917 the aircraft ship "Santa Elena" with four aircraft had been assigned as a floating air base to the II Seeflugstation in Wilhelmshaven, on May 16, 1918, the light cruiser "Stuttgart" was commissioned as the second aircraft mothership after appropriate conversion and placed under the commander of the fleet's pilots (1). A number of small craft joined the minesweeping and clearing units of the High Seas Fleet and Marine Corps from the Baltic Sea. The decommissioning of naval forces previously used in the Baltic Sea resulted in a small reduction in personnel, which benefited naval warfare in the North Sea, without any noticeable relief for the Fleet and Flanders given the severely strained personnel situation caused by the U-boat war. The material measures mentioned did not signify significant reinforcements of the North Sea War.

¹⁾ The department K. d. Flieg. F. existed from February 1, 1918. 189

Outline of the High Seas Forces

Structure of the High Seas Forces at the end of April 1918

Ships of the line:

Fleet flagship "Baden"

I. Suqadron:

"Ostfrlesland" [□, "Thuringia", "Heligoland", "Oldenburg", "Posen" [□, "Nassau", "Westfalen".

III. Squadron:

"König" ₺, "Bayern", "Großer Kurfürst", "Kronprinz", "Markgraf" ₺.

IV Squadron:

"Friedrich der Große" [4], "König Albert", "Kaiserin", "Prinzregent Luitpold", "Kaiser" [4].

Cruiser:

I. Reconnaissance Group:

"Hindenburg" [2] (B.d.A.), "Derfflinger", "Seydlitz", "Moltke", "Von der Tann" [2].

II. Reconnaissance Group:

"Königsberg" , "Karlsruhe", "Pillau", "Frankfurt", "Nuremberg", "Cöln", "Dresden", "Emden" , (I. F d. T.), "Grudenz" (II. F d. T.).

IV. Reconnaissance Group:

"Regensburg" , "Stralsund", "Straßburg", "Brummer", "Bremse"; allocated to: "Stettin".

Mine steamer "Senta".

"Santa Elena" (aircraft mother ship).

"Gertrud" (reserve aircraft mother ship).

Torpedo Boat Flotillas:

1st flotilla: "V 129".

1st Half-Flotilla:

"G 39", "G 38", "G 40", "G 86", "S 32".

2nd Half-Flotilla:

"V 130", "S 135", "S 133", "S 134", "S 139".

II. Flotilla "B 97".

3rd Half-Flotilla:

"G 101", "G 103", "V 100", "G 104", "G 102".

4th Half-Flotilla:

"B 109", "B 110", "B 112", "B 98", "B 111".

V. Flotilla: "G 11".

9th Half-Flotilla:

"V 6", "S 23", "V 3", "V 2", "V 1", "T 196", "T 197". 190



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10th Half-Flotilla:

"G 8", "V 5", "G 10", "G 7", "G 9", "B 183". "T 181".

VI. Flotilla: "V 128".

11th Half-Flotilla:

"V 127", "V 12L", "S 131", "V 125", "S 132".

12th Half-Flotilla:

"V 43", "V 45", "5 50", "5 49", "V 46", "V 44".

VII. Flotilla: "S 62".

13th Half-Flotilla:

"V 78", "S 65", "S 66", "V 83", "S 56".

14th Half-Flotilla:

"T 182", "G 87"*, "G 92", "G 93"*, "G 94"*, "G 89".

VIII Flotilla: "T 180".

15th Half-Flotilla:

"T 193", T 195", "T 192", ,T 189", "T 190".

16th Half-Flotilla:

"T 176", "T 178", "T 174", "T 179", "T 186".

IX. Flotilla: "V 79".

17th Half-Flotilla:

"V 80", S 52", "S 51", "S 60", "S 36".

18th Half-Flotilla:

"V 30", "V 26", "V 28", "S 34", "S 33".

I. Minesweeping Flotilla: "T 103" (later "T 184").

1st Half-Flotilla: "M 52", "M 5", "M 48", "M 13", "M 46", "M 6", "M 57", "A 76", "A 37".

2nd Half-Flotilla: "M 19", "M 18", "M 42", "M 35", "M 61", "M 22", "M 20", "M 21", "A 34" .

7th Half-Flotilla: "M 87", "M 54", "M 44", "M 43", "M 51", "M 45", "M 33", "M 34", "A 54", "A55".

II. Minesweeping Flotilla: "A 62".

3rd Half-Flotilla: "M 59", "M 69", "M 93", "M 96". "M 75", "M 77", "M 83", "M 71", "T 68", "T 60".

4th Half-Flotilla: "M 89", "M 88", "M 78", M 84", "M 70", "M 92", "T 67", "T 69", "A 81".

9th Half-Flotilla: "T 81", "T 55", "T 63", "M 90" with 6 trawlers. III. Mine sweeper flotilla: "T 149".

5th Half-Flotilla: "M 65", "M 53", "M 37", "M 60", "M 25", "M 3", "M 4", "M 94", "A 35".

6th Half-Flotilla: "Ml 66", "M 28", "M 29", M 30", "M 10", "M 7", "M 8", "M 2", "A 36", "T 74".

8th Half-Flotilla: "M 32", "M 58", "M 1", "M 41", "A 53", "A 87".

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^{*} Sunk on March 30, 1918. 191

Outline of the High Seas Forces

II. Mine Sweeping Division:

Steamer "Ammon", 11 F motor boats, motor boat "Henriette".

IV. Minesweeper Flotilla (1): "M 50".

10th Half-Flotilla: "M 76", "FM 3", "FM 4", "FM 19", "FM 20", "A 33", "T 75", "T 77" and 4 trawlers.

11th Half-Flotilla: "A 52", "T 70", "A 26", "T 73" and 8 trawlers. 1 M-Boot enters.

12th Half-Flotilla: "M 38", .A 38", "T 72", "A 41", "T 76" and 7 trawlers.

VI. Minesweeper Flotilla: "T 132".

13th Half-Flotilla: steamer "Indianola" (mother ship).

14th Half-Flotilla: steamer "Trichen" (mother ship).

Steamer "Primula" (workshop ship, 12 l motor boats and 4 groups of UZ boats, of which 2 groups of 7 and 2 groups of 8 UZ boats each.

In addition, there will be new buildings "M 97" and "M 98" after completion.

North Sea Outpost Flotilla: Steamer "Nordsee".

1st and 2nd Half-Flotilla, each with 8 groups and a total of 75 trawlers.

Barrier breaker: Half-Flotilla Ems/Jade/Weser, subordinate to the North Sea Outpost Flotilla. 4 groups of 3 barrier breakers each.

Coastal protection flotilla of the Ems: cruiser "Arkona".

I. Escort flotilla: steamer "Donau".

1st Escort Half-Flotilla: "T 127".

"T 114", "T 109", "T101", ..T 125", "T 112" (1st group).

"T 99", "T 106", "T 102", "T 105", "T 93", (2nd group).

2nd Escort Half-Flotilla: "T 185".

"S 19", "S 24", "T 122", "T 148" (3rd group).

"S 18", "T 135", "T 147", "T 131", "T 196", "T 197" (4th group).

3rd Escort Half-Flotilla: "T 136".

"A 63", "A69", "T 92", "A 72", "T 104" (5th group).

"T 128", "T 138", "T 97", "A 68", "A 71" (6th G.-Group).

II. Escort flotilla: "T 128".

5th Escort Half-Flotilla: "A 79" and 11 trawlers.

6th Escort Half-Flotilla: "A 74" and 11 trawlers.

7th Escort Half-Flotilla: "A 70" and 11 trawlers.

8th Escort Half-Flotilla: "A 86" and 11 trawlers.

9th Escort Half-Flotilla: "A 75" and 11 trawlers.

10th Escort Half-Flotilla: "A 78" and 11 trawlers.

1) Until February 12, 1918 North Sea Auxiliary Minesweeping Flotilla. 192

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Ems outpost flotilla:

I. Half-Flotilla: steamer "Poseidon" and 12 trawlers.

II. Half flotilla: steamer "Uranus" and 12 trawlers.

Picket flotilla Jade/Weser: steamer "Frisia III" and 8 vessels (steamer or trawler).

Jade Blocking Vessels Division: 3 vessels.

Jade Barrage: 10 vessels, 33 barges.

Blocking vehicle division of the Weser: 2 vessels. Ship barrier on the Ems: 2 vessels, 6 barges.

Elbe outpost flotilla: steamers "Kaiser", "Zieten" and 2 trawlers.

Blocking vehicle division of the Elbe: 11 vessels.

Barrage on the Elbe: 3 tugs, 6 lighters. *Headquarters Heligoland*: "Helga".

After the Baltic theater of war had withdrawn and the overall decision focused on naval warfare from the North Sea, Admiral Scheer requested that all forces on the water at home be subordinate to him. From this he expected an economic exploitation of all forces: U-boat warfare and the development of the naval air force meant that the number of personnel in the fleet, especially officers and specialists, was constantly being "picked around". Admiral Scheer saw a danger in this, since the Formations of ships increasingly lacked capable officers and repercussions on discipline could not be avoided. The necessity of always having to approach the Admiralty first when moving individual boats in the Baltic Sea area meant, in the opinion of the Fleet Chief, unnecessary friction work. The Chief of the High Seas Forces thought it best to overlook where the main focus was and where it might be necessary and expedient to shift or decommission. He saw no increased burden in the addition of all Baltic Sea Formations to the High Seas Fleet, since the independence of the commander of the Baltic Sea Forces to be subordinate to the High Seas Chief would be fully taken into account and only the command would take the place of the application and his circuitous work. The Chief of the Naval Staff did not go along with the wishes of the Chief of the Fleet, even if he did not regard the present organization as ideal; he believed that there was a balance between advantages and disadvantages. Admiral Scheer's application was not pursued further beyond the Chief of the Admiralty.

The mine situation in the German Bight at the beginning of 1918 was briefly summarized as follows: the coastal roads - in the north Weg Weiß, in the south Weg Schwarz - were not usable. Weg Weiß was closed at the end of October 1917, further work on this path had been postponed for the time being. Weg Schwarz had been closed since the end of November, work on this path had progressed only slowly due to bad weather. ¹⁹³

Page 179 Mine location in the German Bight

The Yellow and Middle Paths, to the north of it, leading freely from the coast, were used for entering and leaving. The middle route was difficult to navigate, and the yellow route could only be used with a strong escort, since new contamination on the outskirts of this route, which the enemy knew well, forced extreme caution. The northernmost Blue route, free from the coast, was navigable under security, but its search and cleaning was not yet finished.

At the end of January 1918, the need to organize the U-boat escort service much more tightly led to fundamentally new orders from the Fleet Commander. Two different types of convoys were set up from formations organized and trained for this purpose, namely fast and slow U-boat convoys, the fast ones of three and the slow ones of six groups of about 9 vessels each. The torpedo boats of the Ems and North Sea outpost flotilla as well as A-III boats of the minesweeping units were considered for the fast convoys. With the necessary reserve, 36 boats were necessary for this. The slow convoys were to be made up of trawlers and a few torpedo boats or M-boats serving as guide boats. 6 torpedo boats and around 66 trawlers were needed to ensure one or two slow escorts a day. In addition, it was decided to form anti-cruiser convoys in order to combine these special vessels, which were currently inadequate in terms of personnel and material as a submarine convoy, into a military unit.

The reorganization was carried out in the second half of February 1918. The management of the U-boat service was in the hands of the chief of the coast protection flotilla of the Ems on the cruiser "Arkona" in Emden. The 1st Escort Flotilla with 1st to 3rd Escort Half-Flotilla and the 2nd Escort Flotilla with 5th to 10th Escort Half-Flotilla were subordinate to him As before, the barrier breakers remained divided into four groups of three barrier breakers each.

At the same time, the North Sea Auxiliary Minesweeping Flotilla was renamed IV. had been increased. In addition to torpedo boats, A-boats and M-boats, the new formations consisted largely of trawlers, which were to be replaced by FM boats over the course of time. As a result of the reorganization, the minesweeper flotillas were released from the U-boat escort service and were available without restriction for minesweeping and clearance services. The torpedo boat formations of the High Seas Fleet were mainly returned to their actual tasks.

A large part of the English mining operations against the German Bight had hitherto been carried out by the 1st Light Cruiser Squadron. In early January 1918, the 1st Light Cruiser Squadron was made available again for direct cruiser duty with the Grand Fleet, and a mine-throwing force consisting of destroyers, the XX. Flotilla (1), formed.

1) torpedo boat destroyer		". "Ferret", "	Ariel", "Telemachu	s" and
3 V-class destroyers (Newbolt V,	p. 221). ¹⁹⁴			

6. Naval War from the German Bight to April 1918

Giving up the destroyers for this special task was a significant loss for the Grand Fleet, especially since the mine-throwing operations often had to be covered by stronger forces and the lack of destroyers when the combat units went to sea had long been perceived as a weakness against the U-boat threat. A meeting of the Admiralty on January 2, 1918 had underlined the decision to continue the mine warfare against the German Bight by all means.

A plan worked out by the Admiralty, which aimed at the immediate blocking of the German estuaries by sinking blockships, was considered impracticable on closer examination. Even if the blockship requirement, estimated at 29 old battleships and 42 old cruisers, was used to the full—merchant ships were not available for this purpose because of a lack of merchant ship tonnage—no sure success could be expected. If such a block attempt had been carried out in a generous, promising manner, possible dangers would have arisen which would have affected the existence of the Grand Fleet and thus the basis of British naval strategy.

Material support from the navies of the United States, France and Italy, which was considered necessary, was rejected by them. When the United States entered the war, the possibility of blocking the sea area between the Orkney Islands and Bergen by means of a generous mine blockade (Northern Barrage) was examined. By the beginning of 1918 this question had matured to such an extent that operations could begin as soon as the material conditions were in place. In addition to the mine-throwing units that had to be specially made available for this purpose, the implementation of the operation also required forces of the Grand Fleet in the long term, since this had to provide destroyer security for the British and American forces laying mines. The first mines of this large mining area were laid on March 3, 1918 in the western part (1).

The immediate protection of the convoys running between Scandinavia and England against attacks by surface forces, the protection of sea navigation around England threatened by U-boats by the release of destroyers and the measures to tie off the German Bight all worked in the direction of a strong fragmentation of forces in the Grand Fleet. The possibility of a decisive battle with the German High Seas Fleet was more or less eliminated.

The main effort of the English in the mine warfare was directed at the beginning of 1918 against the Yellow Route, the growing importance of which could not have remained unnoticed as a result of the increased appearance of U-boat escorts during December 1917. During January, U-boats "E 34" laid barriers 1 and 5, each with 20 mines, and surface forces laid barriers 2, 6, 10 and 11, with a total of 864 mines, including 200 dummy mines for the first time. In February 1918 Yellow Route remained unmolested. Barrier 2, thrown with a time setting, which lay across the Yellow Route, was not found; the escort and control trips broke off to the east of this barrier; an estimated 18 U-boats have arriving and leaving drive through the barrier without touching the mine.

1) Newbolt '	V, p.	229.	195
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Blocking of the "Yellow" Route

Barrier 1 was passed through on January 11 by numerous German naval forces, including the battleships "Markgraf" and "Kronprinz" with U-boat escorts, without the barrier appearing. On January 13, the trawler of the Ems picket flotilla "UC 78" (Lieutenant Kukat) left without equipment due to heavy seas. The picket boat "Lachs" sighted what appeared to be an anchored mine. Despite the heavy seas, "Lachs" and "Fro" (helmsman d. L. Danielszeck) deployed the search device, fixed the anchorage and shot down the mine. The wind was blowing from W to WNW 6 to 7, gusty to force 9. The leader of the escort informed the U-boat that it was not possible to continue the journey with equipment due to the weather conditions. "UC 78" urgently insisted on the continuation of the escort, so that the escort leader continued the escort without equipment. Outpost boat "Fro" — which was going port side abeam of "UC 78" — ran into a mine at barrier 1 at 1:20 p.m. "Fro" was hit in the forecastle, drifted for about 5 minutes and then sank forwards into the depths. All escort boats immediately drove to the scene of the accident, but it was no longer possible to go alongside in time. 12 people floating in the water were saved alive. Further search for survivors was unsuccessful; the loss was 10 dead, 2 wounded. The escort leader broke off the escort and returned to Borkum with "UC 78".

Yellow Route was closed, U-boats initially used middle path. To avoid accumulation there, some U-boats were also sent via the Baltic Sea route. Work on the Yellow Route progressed very slowly as a week-long period of bad weather nearly halted minesweeping.

The use of the middle path was soon interrupted. On January 18, "U 71" was guided westward on the central route by a group of 6 trawlers from the 1st Auxiliary Minesweeping Half-Flotilla, command boat "Doggerbank" (Oberleutnant z. S. d. R. von Glümer). The convoy was broken off on January 19 at 5:50 a.m. in 047 ß in the meantime very bad weather, wind SW 10 to 12, heavy seas, hazy, rain gusts, and "UC 78" coming from the west recorded. During the night English destroyers had Barrier 3 thrown on the middle path, the English mine-throwing association and the convoy led through "Doggerbank" must have passed each other twice in the dark, unnoticed. "UC 78" had to be guided without equipment. At 11 o'clock the group leader boat "Doggerbank" ran into a mine at barrier 3 and sank within a few seconds. The stern was hit and carried away as far as the bridge. Surface stands could be observed in a northeasterly direction. "UC 78" and the search boat "Direktor Schauseil" anchored, the other boats stayed close to the accident site. Search boat "Seestern" launched his boat and rescued the commander and 10 men from "Doggerbank", one of whom died shortly after boarding. The behavior of the search boat "Seestern" (Kapitänleutnant Thele, Chief of the 2nd Auxiliary Minesweeping Half-Flotilla of the North Sea) was a brave and extraordinary achievement in the heavy, rough sea and the very cold weather, to whom alone the rescue of the rescued crew was to be thanked. 196

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Boatswain's Mate Kölinke, Chief Seaman Hempel, Chief Seaman Eben and Medical Mate Pohl excelled in particular. After Oberleutnant z. s. d. R. von Glümer had recovered on "Seestern", he took over the leadership of the group again. Despite the heavy seas, which had decreased to around wind force 10 with a right-hand wind and heavy hail gusts, two steamers brought out equipment. It was possible through skilful leadership to circumvent the barrier and bring in "UC 78" without touching any more mines.

The scene of the accident had been reported by F.T., but due to incorrect transmission it was assumed that it was a known minefield further to the east. A convoy of the III. Barrier group consisting of "Steigerwald" (Kapitänleutnant d. R. W. Müller), "Franken" (Kapitänleutnant d. R. Berg) and "Gifhorn" (the latter was sent back during the night due to engine damage) with "S 16" (Oberleutnant z. S. d. R. Frind) and "G 196" (Oberleutnant z. S. Coupette, Gustav) from the outpost flotilla of the Ems as security boats, should bring out "UB 22" (Oberleutnant z. S. Wacker) and was not held back. The sea was still rough with a south-westerly wind. "S 16" was in front of the U-boat and at 5 p.m. struck a mine of barrier 3 when it was trying to turn the barrier breakers that had veered in front of a surface level that had been sighted destroyed and sank. Immediately afterwards, "UB 22" struck a mine and also sank. No one could be rescued from "F 16" and "UB 22". "G 196", which had stood at the end and had got free, anchored. Rescue attempts made by "G 196" were unsuccessful.

The auxiliary minesweeper flotilla of the North Sea (Korvettenkapitän Kral) received the order to stand at the scene of the accident on the morning of January 20th to collect the III. To support the security breach group in passing through the contaminated area and, if possible, to establish a mine-free route. The Fleet Commander ordered that the bringing in of the barrier breakers should be covered by a battleship division and light cruisers on the Middle Route, because the heavy radio traffic made the presence of armed forces in the area of the new barrier likely. Under the leadership of Kapitänleutnant d. R. Thele was in optical signal contact with the A-boat group of the North Sea Auxiliary Minesweeper Flotilla with the boats "A 70", "A 71", "A 73", "A 77" and "A 38" on January 20 at around 8 a.m the barrier breakers and "G 196". The swell had increased again, a southwesterly wind was blowing 6 to 8 with a fairly rough, increasing sea. Kapitänleutnant d. R. Thele reported the following events in excerpt as follows: "8:30 a.m. "Steigerwald" made the Morse code "Be careful, there are mines near the steamers". Since the swell had increased to such an extent that a voyage with a search device was out of the question, I thought of getting the boats in front of the barrier breakers and going back on the course we had steered, because we hadn't seen any mines so far. 197

Page 183 Heavy losses from the "Middle" Route.

"Steigerwald" was informed of this intention and he was asked to weigh anchor. The barriers weighed anchor, the A-boats stood north of the barriers on a southerly course. Aboats turned to starboard on course NzE½E. During the turn, "Steigerwald" made "Line of mines ahead of the ships," which I took to mean that there were mines ahead of his ship. At the same moment mine was reported ahead and a second and third mine were immediately seen. The rudder was immediately put hard to port, the mines were barely 30 m. "A 70" went ahead at high speed and was about 10 to 20 m from the nearest mines when a mine detonated on starboard 4 dashes, immediately afterwards 4 more mines on starboard ahead, starboard astern and one on port. All of us on board felt like we were hit ourselves as a rain of oil and water fell on us. It was gone ahead on AK. A look aft showed "A 77" (Oberleutnant z. S. d. R. Hartig) sinking, its front part had been torn off. Immediately afterwards, heavy detonations again, "A 73" (Obersteuermann Waldmann) was hit and broke through in the middle. When the "A 70" was clear of the mines, a lot of which was now in sight, they went ahead slowly. I didn't think I could justify steaming back through the barrier again to help the sinking boats, especially since mines came into view everywhere when I tried to turn around. "A 71" and "A 38" retreated immediately at the first AK detonation and were thereby saved from the same fate as "A 73" and "A 77".

"A 70", which thought it was separated from "A 71" and "A 38" by the barrier, managed to maneuver out of the barrier. The barrier breakers anchored immediately, launched boats and rescued 1 officer and 10 men, of whom later 3 died. "A 71" and "A 38" initially steamed south under the prudent leadership of the commander of "A 71" (Oberleutnant z. S. d. R. Bogenschütz) and hit surface stands everywhere at a distance of 60 to 80 m. Eventually, after the surface levels had ceased, the two boats pushed through to the east. "Steigerwald" and "Franken" followed the two boats. The trawlers of the 5th Half-Flotilla, which had meanwhile arrived, were turned south by the "A 71". Of 13 small vessels, 5 had fallen victim to the mines. The two deep-penetrating barrier breakers had crossed the barrier, anchored between the barrier parts, had swung around in the current, but still got out of the lockup unscathed.

After mines were hit by "A 73" and "A 77", a cutter from "A 77", which was manned by a helmsman and 15 men, managed to escape from the scene of the accident. The raft that had been drifted north over the barrier by the barrier breakers was reported in vain by planes and torpedo boats on January 21 and 22. In the night of January 23/24, the cutter landed near Hanoss on the river with a completely exhausted crew Danish coast.

The valuable "UB 22" unit had justified the deployment of the barrier breaker and minesweeper forces under the present circumstances, but after "UB 22" was lost, the self-help of the barrier breaker remained more promising than the deployment of the very sensitive small vehicles. 198

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During the attempt of the II. At the end of January 1918 it was possible to create a new path in the middle with a width of about 4 nm.

The yellow route, which had been moved somewhat to the south, was put back into use in January after a number of inspection trips had been carried out. For increased security, the B. d. A. from January 29, 1918, the U-boat escort was to be reinforced by a Minesweeping Half-Flotilla driving ahead until further notice. On January 29th, the 6th Minesweeping Half-Flotilla found the barrier 5 thrown on January 25th while retreating from a U-boat escort and cleared some mines. During inspections by the 8th minesweeping Half-Flotilla on the same day, another mine from this barrier was cleared without a proper search being possible in the prevailing fog. A 1.5 nm wide mine-free path was completed north of the found mines of barrier 5 on 31 January.

On January 30th, a submarine convoy consisting of nine trawlers with "U 86" and "U 53" left West on Yellow Route. It was very hazy, SW wind force 3 to 4, calm sea. In view of the foggy weather that day, sending a Minesweeper Half-Flotilla was out of the question; the command of the B. d. A. from January 29th was the Chief of the III. Minesweeper Flotilla, Kapitänleutnant Wolfram, who was in charge of the escort service that day, not yet known. Shortly before midnight, the search boat "Senator Westphal" (helmsman d. R. Heyer) ran into several mines of barrier 6 thrown on January 25. "Senator Westphal" sank immediately, the commander and 18 men were rescued. A search of the accident site for other survivors was in vain. After a two-hour stay, the escort group continued the journey with the U-boats; managed to bypass the barrier by hitting a hook and release the U-boats to the west free of mines. The escort group arrived in Borkum Reede on the afternoon of January 30 without incident.

On the afternoon of January 31, the 5th Minesweeping Half-Flotilla (Kapitänleutnant Glimpf, Friedrich), command boat "M 65", with "U 102" and "UB 21" left the Ems on Yellow Route. Two trawler groups belonged to the convoy three trawlers each of the Ems outpost flotilla; it consisted of a total of 6 M boats, 1 A-boat, 1 torpedo boat and 6 trawlers. The II Barrier Group had been sent ahead on a patrol on Route Yellow and had reported as a warning that barrier "Schwaben" had slipped west of point Q 2; it remains questionable whether the device had caught a dummy mine of barrier 11 or a deep mine of the barrier laid on October 29, 1917. In response to the report, the commander of the 5th Minesweeping Half-Flotilla moved a little further north and through this detour ended up in the south wing of barrier 6 at around 4 a.m. on February 1. Two mines detonated in the device, numerous splinters fell on deck. "M 65" caught a mine with its rear while turning.

Losses on Barrier 6

Stern lifted, rudder bent, 1 man killed. "M 65" was brought in towed by "M 37". The Half-Flotilla commander decided to give up trying to get the U-boats through, especially since another M-boat had a rudder accident. The submarines were brought back to the Ems by the trawlers.

The severe contamination of the Yellow Route prompted the Yellow Route to be closed to U-boats until further notice and that the convoys arriving and departing were to be routed via the Blue Route. Before work continued in the outskirts, a night check was to be carried out to determine whether the newly found barrier 6 to the south could be bypassed. The work on Middle Route and Black Route was to be continued and at the same time a new path was to be sought through dead ends.

The attack on the minesweepers on November 17, 1917 had increasingly forced the protection of the forward, unprotected naval forces by ships-of-the-line, battlecruisers and light cruisers into a routine managed by the picket chief. As soon as minesweepers or U-boat escorts were in the outskirts of the German Bight, my cruisers, battlecruisers, and ships of the line were pushed forward along the searched route from the outside in. The need for torpedo boats to protect ships from submarines rose sharply, compromises between the threat to ships from submarines and the safety of weak armed forces in front became necessary, advances by torpedo boat flotillas often failed in favor of the safety of the exit and entry routes, which is essential for submarine warfare. At the beginning of 1918, torpedo boat advances against commercial traffic on the English coast were scheduled for certain times, particularly favorable due to the weather conditions. The advances had to be stopped several times for weather reasons and later because of the mine situation. Finally, from January 30th to 31st, the II Torpedo Boat Flotilla (Korvettenkapitän Heinecke) carried out an advance via Weg Blau into the sea area west of the Dogger Bank in order to search the neutral channel for suspicious vessels and to prevent the English fishing fleet from staying in the Dogger Bank restricted area. The operation was uneventful, apart from about a dozen unsuspecting Dutch fishermen no vessels were found in the neutral channel.

On February 2, the cruiser "Stralsund" (Fregattenkapitän Hillebrand, Otto) ran into a mine near the minesweeper on Middle Route, which probably belonged to a somewhat remote part of the barrier 75 thrown on December 30, 1917 (time mines with effect until February 6). Two compartments were full of water, the ship could be brought in at a speed of 5 nm under its own steam. The covering forces, light cruisers, battlecruisers and a meeting of ships of the line, had been advanced so far west that day that the light cruisers kept sight of the 3rd minesweeping semi-flotilla (Lieutenant Captain von der Marwitz) working west of 6° 40' E, because reports received seemed to indicate that enemy naval forces were at sea. Cruiser "Stralsund" was ready for action again on April 26, 1918.

6. Naval War from the German Bight to April 1918

On the same day, February 2nd, the use of the blue route led to a very momentous encounter by minesweeper forces on mines, in fact, as was already the case on May 14, 1917 with "U 59" and the steamer "Fulda", on mines of the German Horns reef barrier. A group of escorts from the 2nd Half-Flotilla of the Ems outpost flotilla, which had been designated to escort along the Blue Route, arrived at 10:45 a.m. on February 2, led by Lieutenant z. S. d. S. II Steiger with the boats "Weddigen" (Steiger) command boat, "Rheinfels" (helmsman Meentzen), "Brockeswalde (helmsman Romahn), "Anneliese" (first helmsman Classen) and "Ludendorff" (deck officer mare) from Heligoland with " UB 65" approached the convoy. "Ludendorff" drove as a safety boat directly behind "UB 65". The 1st Auxiliary Minesweeping Half-Flotilla (Kapitänleutnant d. R. Reuter) with the boats "Professor Pagel" (helmsman Meyer), leader boat, "Kronprinz Wilhelm", "Kleiss" (Leutnant z. S. d. R. Krohn), "Flensburg" (Oberleutnant z. S. d. R. von Glümer), "Seestern" (Leutnant z. S. d. R. Stäcker) and "A 33", which had preceded the convoy, joined the convoy at point K. The weather was hazy, light sea, southerly wind, so that after passing point K, which was still clearly determined by navigation, aground of coupling and sounding had to be navigated without sighting the navaid in this sea area, electricity charges from the nautical chart and tide tables were taken into account; Comparisons of position did not reveal any significant differences. After passing point K, "U 104" joined the convoy and sat in front of "Ludendorff" behind "UB 65". westnorthwest course; while swerving, the search line between "Kleiss" and "Flensburg" broke for reasons that could not be determined with certainty. The connection was restored after about an hour, and the march could be continued at 8 p.m. after the convoy had been regrouped. At 8:20 p.m "Kleiss" and "Seestern" encountered mines, "Seestern" sank immediately) "Kleiss", "Kronprinz Wilhelm" and "Professor Pagel" anchored beyond the barrier. The crew of "Seestern" was mostly taken on by "A 33", the crew of "Kleiss", on which all light signals had failed, was rescued by "Flensburg" with the exception of one missing person. "Flensburg" took over the leadership. The two squadrons of the Ems Outpost Flotilla turned away to bypass the barrier. The starboard wing boats "Anneliese" and "Rheinfels" also ran into mines at around 8:30 a.m. and sank. "Flensburg", "Weddigen" and "Brockeswalde" tried in vain to rescue the crews and finally anchored. "Ludendorff" watched the sinking ships and abandoned boats, without the possibility of providing assistance from the ship's boat at a distance of about 2000 m. "Ludendorff" had the impression of being surrounded by mines. The general assumption was that he had gotten caught in an unknown enemy minefield. "Flensburg", "Weddingen" and "Brockeswalde" anchored later.

At 12:15 a.m. on February 3, "Flensburg" hit a mine while swinging around and sank, losing 27 men; part of the crew could be rescued. 201

The Fatal Horns Reef Barrier

At 2 a.m. "A 33" was detached to Heligoland with the rescued members of the "Seestern" because of damage to the bow. The two U-boats with the trawlers "Ludendorff", "Professor Pagel", "Kronprinz Wilhelm", "Brockeswalde" and "Weddigen" were now at the barrier.

The U-boats and "Ludendorff" were, as could be ascertained in the light, about 2000 m from "Weddigen" and "Brockeswalde" in a southeasterly direction, "Professor Pagel" and "Kronprinz Wilhelm" about 1000 m SW from "Weddigen" and "Brockeswalde". "Weddigen" and "Brockeswalde" thought they were clear of the barrier when it got light and weighed anchor. While turning to port, "Weddigen" ran into a mine and sank after 1½ minutes, part of the crew was rescued by "Brockeswalde", who anchored again, salvaged; a raft with 4 men drifted north across the barrier. The half-flotilla commander on "Professor Pagel" had to refrain from taking the crew down with boats from the severely endangered "Brockeswalde" because of the current and increasing swell.

At midnight the picket commander had received orders to send out a meeting of ships of the line to provide assistance as soon as it got light. At 4 a.m. on February, "Prinzregent Luitpold" and "König Albert" set sail and sought contact with the endangered submarine escort. When they did not find the convoy in the reported area in very unsightly weather, the ships of the line dropped anchor to find out more about the position of the boats. At about 1:30 p.m. it became clear from radio bearings that the boats had in all probability run into the Hornsriff barrier. Attempts to get in touch with the convoy by torpedo boats initially failed. At 9:30 p.m., the Fleet Commander ordered further outpost forces to stand near Hell Werden to cover "Prinzregent Luitpold" on February 4; "von der Tann", "Derfflinger", "Seydlitz", "Kaiser" and "Brummer" had to attempt to run out immediately, give up because of fog. It was not until February 4th at 7:50 a.m. that the ships mentioned weighed anchor and set sail with the 18th Torpedo Boat Half-Flotilla. They had to anchor again during the day because of fog, and on the evening of February 4 they started their return march when they heard that "Prince Regent Luitpold" and "König Albert" were returning to the Jade after the rescue work had been completed.

Until the morning of February 3, the trawlers anchored on both sides of the dam had not recognized that the convoy was lying in the south wing of their own Horns reef barrier; the actual situation only became probable to the commander of the half-flotilla in the course of the afternoon. The 4th Auxiliary Minesweeping Half-Flotilla of the North Sea (A-boats) sent to provide assistance, as well as "T 101" and "T 93" of the North Sea outpost flotilla, were lost on February 3 after the detour via the anchorage of "Prinzregent Luitpold" and "König Albert". Arrived at "Ludendorff" and the two submarines at 3:10 p.m. Attempts to bring the endangered vehicles out of the mine area and to bring down the rescued on "Brockeswalde" were initiated, but were prevented by the thick fog that set in at 5 p.m. The U-boats and "Ludendorff" remained at anchor, "T 101" and "T 93" remained close to them during the night.

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During February 3rd it was not possible to bring help to the severely endangered vehicles. At 9:45 p.m. there was another heavy mine detonation: "Brockeswalde" had hit a mine and sank without a man being able to be rescued.

On the morning of February 4th, the VI. Mine clearance division (Korvettenkapitän Bade) with the mother ship "Borkumriff" arrived at the pair of the battleships after a long stay through fog. The promising attempt to advance to the trawlers and submarines after the boats had been released was aborted because the help had become superfluous in the meantime. At 11:00 a.m. on February 4, the chief of the 1st Auxiliary Minesweeping Half-Flotilla had instructed "Ludendorff" to anchor with the U-boats and head for Blue Route. "Professor Pagel" and "Kronprinz Wilhelm" circumvented the barrier to the south and at 1 p.m. escorted the U-boats to Heligoland.

On February 5th at 6:30 p.m. "U 104" and "UB 65" arrived in Helgoland with the remains of the convoy "Professor Pagel", "Kronprinz Wilhelm" and "Ludendorff". Of 15 trawlers, 7 had sunk, the loss of personnel was heavy: 31 men from the auxiliary minesweeper flotilla and 109 men from the outpost flotilla on the Ems had fallen victim to their hard service. Again it was the Hornsriff barrier that had caused these losses. Strong and unsafe current displacement in unclear weather, difficulty in navigating slow-moving escort boats and the urge to Leading the U-boats to their combat area even in unsightly weather had been the driving force behind setting aside certain navigational safety requirements required in peacetime and paving the way to the enemy with our own full commitment. The bad experiences with our own barrier at Hornsriff were increasing the important problem of preventing enemy mine blockage by protective barriers in a generous form, into the background.

Since the last losses had certainly been caused by our own mines, the High Seas Command could rightly state in mid-February that the mine conditions in the German Bight had basically not deteriorated. Of the three main routes, yellow, middle and blue, only the middle route was unsafe. Yellow Route and Blue Route were free of mines, but Yellow Path should be used as little as possible to avoid compromising it. Black Route was considered unsafe for U-boat escorts, but it was used by surface forces with the necessary safeguards until mid-February. Fleet Command was well aware of the growing difficulties in keeping the routes open. Daytime surveillance has so far been carried out mainly by airships and airplanes, but the number of days on which airship reconnaissance was possible was low, and the observations of the airships could only be used in exceptional cases, since the airships could not be used because of the threat from enemy planes in great heights had been pushed, the range of the aircraft was only sufficient for the planned permanent surveillance of the outskirts in the west - from Borkum or Norderney. Efforts were made to prepare suitable cruisers as mother ships in order to enable the planned occupation by aircraft in the north-western outskirts as well. Furthermore, the main approach routes to the valid entry and exit routes were continuously observed by unobtrusively armored trawlers, in particular by the boats of the special groups.²⁰³

Operation against the channel blockade

To ward off enemy mine attacks, the nocturnal approach of torpedo boats was planned as before: on bright nights, radially following the run-out routes, on dark nights, patrolling the routes in the outskirts. The more these trips were put in the foreground, the less advanced outpost forces could count on planned U-boat security. The success of these torpedo boat stripes depended very much on chance.

In view of the mine situation described, Admiral Scheer decided on a far-reaching operation by torpedo boat forces of the High Seas Fleet against the guarding of the Dover-Calais road. The Commanding admiral of the Marine Corps had asked the Chief of the High Seas Forces to launch a strike with surface forces from the German Bight against the Anglo-French channel blockade in view of the tightened blocking and surveillance of the Dover-Calais road. For the first time, a canal operation should be scheduled without first calling at Flanders ports, in order to ensure that the enemy was surprised.

The Fleet Commander appointed the II. Torpedo Boat Flotilla (Korvettenkapitän Heinecke) for this operation. The execution was initially scheduled for February 7, 1918, but was delayed by bad weather. When the march was to begin on February 13, after better weather conditions had set in, the yellow route, which was the primary possibility for the unnoticed departure, was considered unusable because of a false alarm from an outpost boat. The II. Flotilla therefore used the route along the Frisian coast, at the risk of being spotted and reported early from Dutch territory. It was quite welcome that the weather was not clear on February 13th and that the mine-free passage at Terschelling had to be negotiated without lights and landmarks using the plumb bob. At the level of Haak's lightship, however, the flotilla was forced to turn back and anchor north of Norderney because of fog, which prevented a high night march speed in a closed formation. The march began again on February 14th, with exceptionally clear weather. The commander of the flotilla initially set off from Helder on a westerly course for camouflage, steered south out of sight from land and after dark along under the Dutch coast to Schouwenbank. The flotilla boat group (Korvettenkapitän Heinecke), consisting of "B 97" and the 4th Torpedo Boat Half-Flotilla (Kapitänleutnant Klein, Friedrich) with the boats "B 109" (leader boat), "B 110", reinforced by "V 100", as well as the group of the 3rd Torpedo Boat Half-Flotilla (Kapitänleutnant Kolbe) with "G 101" (leader boat), "G102", "G 103", "G 104". At 8 p.m. on February 14, "G 104" had to be released to Wilhelmshaven due to a capacitor accident near Hoek van Holland. At 0:30 a.m. on February 15, the groups separated at the exit of the canal north-east of Sandettiebank. The Heinecke group were targeting the barriers west of Varne and Colbart Bank, Kolbe Group assigned the locks east of this bank. 204

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Korvettenkapitän *Heinicke* intended to bypass the first northern barrier under the English coast, first to attack the barrier assumed to be south of Dungeness and, on the march back, to roll up the northern barrier at Varnebank and Folkestone. This light barrier could already be seen from afar; on approaching it could be seen that it was formed by a larger number of anchored or buoyed vessels, laid out not in one line across the Channel, but staggered in a wide strip. According to the impression on "N 97", these vessels searched the fairway, sometimes with searchlights, sometimes they put burning magnesium bodies overboard about every quarter of an hour, which, drifting in the current, illuminated the area at 2 to 35m almost as bright as day for several minutes. In between they drove numerous dimmed vessels about, addressed as armed trawlers, submarine chasers, or motorboats. To the north-west of the barrier a large searchlight, apparently set ashore between Dover and Folkestone, laid a fixed light barrier in the direction across the Channel. Under these circumstances, bypassing the first barrier was impossible, and Korvettenkapitän Heinecke decided to attack immediately.

The guard in Dover Strait was considerable. The English forces guarding the Dover Strait were distributed as follows: the light cruiser "Attentive" was lying in the Downs with the destroyers "Murray", "Nugent" and "Crusader". The two destroyer leaders "Swift" and "Marksman" patrolled the lightship immediately east of the South Goodwin. The destroyers "Termagant", "Melpomene", "Zubian" and "Amazon" crossed about 8 nm east of this group. Guarding south of the minefield between Folkestone and Cape Gris Nez was normal as ordered by Admiral Keyes (1). The wheel minesweepers "Lingfield" and "Newbury" patrolled between Folkestone and Varne lightship. Destroyer "Racehorse" and patrol boat No. 50 were stationed east of Varne Lightship and east of Colbert. Two French torpedo boats of the Dunkirk group crossed at Cap Gris Nez as part of the VI Flotilla commanded by an English flotilla commander. In the event of an attack by German surface forces against the Dover Strait, Admiral Keyes had ordered, to secure the more or less defenseless guards, that one half should withdraw to the British coast and the other half to the French coast. The powerful vessels had to cover the retreat and collect on the monitor. All lights were to be extinguished when the signal "overwater attack" (green rocket or green light signal) was given. When German U-boats were sighted, red and white light signals were arranged.

Korvettenkapitän Heinecke steered vertically towards a larger vessel lying in the middle, passing a blinded guard vehicle 50 m to port. The German boats remained unlit; Korvettenkapitän Heinecke had the impression that the German boats were taken for English destroyers or guard vehicles. At 1:38 a.m., fire was opened on the larger vessel — the [paddle] wheeled minesweeper "Newbury" — at a distance of 300 m while turning to starboard at the same time.

1) Newbolt V.	p. 210 ff. ²⁰⁵
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The II. Flotilla at Dover Strait.

At 1.30 a.m. he had routinely set an ESE course at the passage gap; the commander was below deck. The attack came as a complete surprise: "Newbury" was showered with shells, the ship caught fire and was smoking heavily, and steam was escaping from the damaged steam whistle. However, "Newbury" managed to pull itself out of the minefield and anchor despite the heaviest loss of personnel on an N course. The attack had come so suddenly that at first no signal was given; the vehicle had just come out of the yard and had stowed most of its signaling equipment in the hold.

"B 97" mistook "Newbury" for an older cruiser or a ship of the Arabis type, fired a torpedo and believed to have caused the enemy to sink. The torpedo, however, missed.

The first clash could have been decisive in starting security operations if Admiral Keyes' orders had been carried out. The combat action with "Newbury" was noted in many places, but was almost universally misinterpreted in terms of type and significance. The gunfire was never felt to be alarming, it was brought with the report of a U -boat in the vicinity of buoy 12; on "Termagant" it was believed that it was gunfire on the Flanders front. Admiral Keyes was informed by a report received during February 14th that on the night of February 14th a German U-boat was expected to pass east of the Channel on February 15, prepared for combat operations against the expected U-boat; a precautionary warning had been passed on to all guard forces. So the reports from signal stations Dover and Folkestone of gunfire in WSW were not at first alarming. Only "Shipmates", standing near "Newbury", was immediately aware of the destroyer attack; before he could report, however, he was already illuminated and blown up with his guard division. "Shipmates" still managed to escape, after about 20 minutes he was outside the combat zone. But "Shipmates" did not make any report either, because just when he spotted the German destroyers he noticed light signals for a surface attack in the southeast. He failed to give the ordered green light signal as he had no instructions in case of an alarm signal from elsewhere. Moreover, at the moment of danger, the secret books had been thrown overboard, as ordered, and the commander of "Shipmates" remembered the strict orders which clearly prohibited any F.T. broadcast.

After the attack on "Newbury", Group Heinecke had turned to the north-west at reduced speed and fired on the Shipmates Division (5th Division). The vessels fired on, from which the drifter "W. Elliot" sank, caught to burn, some people jumped overboard. "B 97" had to refrain from the initiated rescue attempt because other vessels came into view. A torpedo boat, as "B 97" meant, was not in the vicinity. The attack on the Shipmates Division had also been heard from several quarters, but nowhere had there been any reason for the green alarm signal to be activated. ²⁰⁶

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When approaching buoy 12, the wheel minesweeper "Lingfield" mistook the German destroyers lit up with searchlights for "M 26" and an English destroyer engaged in a fight with a submarine. "Lingfield" drew close and only turned away when shells whistled over its own bridge. Other guards and destroyers also heard the gunfire, some of them believed it was an air raid against Dover patrolled, had been able to observe the battle fairly closely; she saw a burning vessel and had even been fired upon with shells by two destroyers, probably "B 109" and "B 110", which had detached themselves to destroy vessels fired upon. No. 12 was firmly convinced that he had been fired on by destroyers from the Dover forces, who he believed had taken him for a German submarine, and also reported nothing.

Finally, at around 2:20 a.m., Gruppe Heinecke successfully fired on the Tessie Division (15th Division) near buoy 12. Numerous vessels were sighted and fired upon. Hits and destruction were observed, sometimes large amounts of magnesium burned off with violent explosions and illuminated the area as bright as day. The drifter "Veracity" of the Tessie Division had been sunk. An attack on the suspected second barrier further south was out of the question because of the advanced time. At around 2:30 a.m. Group Heinecke began the retreat.

The group under Kapitänleutnant Kolbe wanted to roll up the barrier between Cape Gris Nez and The Ridge from the French coast; they initially headed for Cape Gris Nez. At 1:50 a.m. a capacitor leaked on "G 103"; dismissing the boat was out of the question, but the reduced speed of the boat - about 21 nm - had to be taken into account. A few minutes before the start of the attack, Gruppe Kolbe was seen by the two French torpedo boats crossing at Cape Gris Nez for two to three minutes in the lights of the guard "James Pond" patrolling nearby without realizing the hostile character of the German torpedo boats. The observation station set up at Gris Nez had also seen the boats, but "the detection service worked poorly that night" (1). The first vessel encountered by Kolbe Group was identified as a large armed trawler - it was "James Pond" - and in the surprising Attack set ablaze by artillery fire. Other vehicles, which shone with headlights and magnesium fire, were fired upon and some were set on fire. Here, too, the enemy only realized very late that he had the enemy in front of him. During the attack on the group under "Cosmos" (9th division) and "Clover Bank" (7th division), "Clover Bank", "Cosmos" and "Silver Queen" sank after a few minutes) "Vera Creina", "Golden Gram" and "Golden Rule" were severely damaged. The groups were blown apart, escaping drifters gave the "green" light signal ordered for a surface attack

¹⁾ Thomazi, "La Guerre Navale dans la Zone des Armees du Nord", pages. $190/191.^{207}$

Page 193 The 3rd Half Flotilla off the French coast.

The light signals, which did not reach very far, were only seen by "Shipmates", who did nothing for the reasons described. Kolbe Group steamed further along the guard line and captured the divisions under "Jeannie Murray" (3rd Division) and "Begonia" (11th Division) and "Chrysanthemum" (17th Division) under effective fire. "Jeannie Murray" and "Christina Craig" sank with everyone, "Violet May" and "Treasure" were punctured and shot on fire. At 2:40 a.m. Kolbe Group began the march back to Nordländer Bank.

Gruppe Heinecke believed that they fired artillery at close range at 13 guard vessels, including a submarine hunter, a small torpedo boat and two motor boats, and sank most of them. Gruppe Kolbe estimated their success at 12 armed guard vehicles and two motor boats. As is usually the case with the complexity of night battles, their own successes were overestimated in numbers. According to British information, the total loss due to sinking was 7 drifters and 1 trawler; 5 drifters, 1 trawler and the [paddle] wheeled minesweeper "Newbury" were badly damaged. The total loss of personnel amounted to 89 officers and men killed or missing.

The commander of the monitor "M 26", the focal point of the guard line, had not drawn any conclusions from the thunder of gunfire, the glow of fire and the red-and-white light signal in the north that surface forces were breaking in. What perceptions he had in detail during the fight against "Newbury" and the "Shipmates" Division has not become known. Only the green light signals emitted by escaped guards in the south at about 2 o'clock and observed by "M 26" caused the monitor to steam towards the danger on course S by W without repeating or reporting the critically important alarm calls. "M 26" made its mark during its 45-minute long advance to the south from the fighting taking place at a fairly close distance no picture of the situation. Eventually he met a drifter who confirmed seeing green flares and gunfire, which he assumed was coming from shore. Shortly thereafter, at around 2:20 a.m., "M 26" heard gunfire in the north: the last salvos from Gruppe Heinecke. "M 26" then changed course again in the direction of Varne Bank.

At about the same time, Admiral Keyes, alarmed by the lack of any reports, decided to ask "M 26" the reason for the long-lasting gunfire At 2:53 a.m. finally the little informative answer sent by "M 26" at 2:37 a.m. arrived, "that gunfire was observed south of the north-eastern Varne buoy and that "M 26" was going there to make further determinations ". On further inquiry, "M 26" reported at 3:30 a.m. that a guard had sighted a green light signal, but that everything was quiet at the moment. This first report of the sighting of a green light signal reached Admiral Keyes one hour after the German flotilla had departed! At 3:58 a.m., the destroyer "Syren" confirmed the assumption of a surface attack, which had become a certainty: "Syren" had sighted the burning wreck of the drifter "Cosmos", which sank at 3:16 a.m.

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In understandable concern, Admiral Keyes had already ordered the destroyers in the Downs at 2:35 a.m. to gather south of Goodwin Sand for the destroyer "Moorsom", which was leaving with the leader of the torpedo boats of the Dover Patrol, a measure which was soon reversed when the gunfire stopped and "M 26" merely confirmed part of the last order without realizing it. Finally, shortly thereafter, the reassuring message from the guard "Goeland II" arrived from the north-west end of the minefield: "It is a fine and clear night with a light easterly wind (1)."

At 3:20 am, while retreating, Kolbe Group encountered the destroyers "Termagant", "Melpomene", "Zubian" and "Amazon" near buoy 9, which were about to change course to the south-west; the groups passed each other on the port side. Kapitänleutnant Kolbe thought he had six English destroyers ahead of him and that he should avoid a fight because of the unfavorable position and the reduced speed the half-flotilla was forced to take because of the capacitor accident of "G 103". The tail boat "Amazon", which had sighted the German destroyers first gave three recognition signals. Gruppe Kolbe did not respond to the recognized signal and turned to starboard; three minutes later the opponents had lost sight of each other. Strangely enough, there was no doubt on "Amazon" that the sighted vessels were English destroyers. An exchange of views between "Amazon" and "Termagant" with folding lanterns could no longer lead to any practical result.

At 5:52 a.m. on "G 102" (Kapitänleutnant Delbrück; a mine detonated under the forecastle. Sections XI and XII filled with water, three people below deck were killed and two men were slightly wounded. The boat was hit by a mine that was not caught during the Net mine clearance work was slightly damaged and ran into Zeebrugge with its own steam via the stern. The personnel losses that occurred as a result of this mine hit were the only ones lost during the operation of the II Torpedo Boat Flotilla on February 14 and 15. "G 102" was provisionally sealed in Flanders and arrived in the German Bight on February 20. After replenishing the oil supplies in Zeebrugge, the other boats arrived in Wilhelmshaven at 1 p.m.

The operation of the II Torpedo Boat Flotilla, led by Korvettenkapitän Heinecke on the night of February 14/15, had shown the expediency of a sudden advance into the channel position from the German North Sea Bay. The cleverly executed camouflage of the approach, the energetic and well-planned break-in into the Folkestone-Gris Nez guard line which was about to be attacked, the appropriate tactics of the half-flotillas composed of well-trained and guided boats, and the special suitability of the boat type for independent and far-reaching tasks had not only damaged the enemy directly, but also freed up the Dover-Calais road.

¹⁾ The English Naval History comments on this report: "It could hardly be inferred from this that the courageous but mentally not very agile skipper who made this report saw and heard gunfire for $1\frac{1}{2}$ hours and heard the motor launch that had been under fire had spoken and was himself convinced that German destroyers were on the way." Newbolt V, p. 229.

Successes of the German advance

Immediate observations the next day indicated that the Dover barrier was no longer illuminated that night. The leader of the Flanders U-boats, Korvettenkapitän Bartenbach, summed up his judgment on March 5, 1918 as follows: "The advance of the II Torpedo Boat Flotilla into the Strait of Dover and the resulting sinking of a large part of the security vehicles forming the light barrier of the channel system brought considerable relief to the U-boats." How far and how long the one-time burglary would have an effect in the long run, the future had to teach.

The measures ordered by Admiral Keyes to contain the dangers threatening the guards in the event of an attack had not been able to prevent or disrupt the penetration of the German Flotilla and its work of destruction. Nor had it been possible to engage and damage the departing German forces. The reasons for the complete failure of the orders of the new Commander of the Dover Patrol lay less in organizational deficiencies than in the failure of subordinates, in particular the defective work of the reporting and signals service and the non-compliance with certain basic orders. It was not only decisive that the thunder of guns and the glow of fire, as is understandable in night battles, were often attributed to false causes, but it was essential that the French torpedo boats had not drawn any conclusions from the sighting of foreign destroyers and that the units, who had correctly identified the surface enemy as such, had not immediately given the ordered alarm signals. It had also had an unfavorable influence that just that night, instead of one of the otherwise planned monitors with 30.5 cm guns, an older monitor that had been hired as a replacement was on station. The worst failure, however, had been the behavior of the destroyer division "Termagant": failure to answer the recognition signal would have - this was also the opinion of the court-martial that took place later - under all circumstances lead to the immediate recording of the have to fight.

The success of the II Torpedo Boat Flotilla was not due to happy coincidences, but to energetic and expedient behavior on the German side and the failure of the enemy's resistance.

After the II. Torpedo Boat Flotilla on February 16 and some boats of the III. Torpedo Boat Flotilla had passed Black Route without incident on 17 February on the Helm voyage, this route was contaminated during February by a series of barricades laid by English submarines, particularly barrages 12 and 13. The retreat of "G 102" on February 20, at a time when barriers 10 and 11 were somewhat north of the Schwarz trail, was still unhindered by mines.

After heavy losses on its own Hornsriff barrier and an unsuccessful inspection trip on the Blue Route on February 12, the Blue Route was released again. Since the use of the paths by numerous vessels of the U-boat escorts was unavoidable and on the march light signals and light guidance when slipping out the equipment, in bad weather and poor communication between the vessels were unavoidable, the enemy always had to know the courses used after some time will. ²¹⁰

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The blocking of mines against this Route, which was carried out in the course of February after the Blue Route was re-opened, shows this clearly. The barriers 17, 18, 21, 22 with a total of 2056 mines, which were laid by English mine-laying units — cruisers and destroyers — between February 19 and 24, were clearly aimed at the outskirts of the Blue and Middle Routes.

February could only be used to a limited extent to clean up the mine belt, as the second half of the month was particularly bad. During February the battleships "Westfalen" and "Rheinland", the III. Blocking Breaker Group and the 9th Minesweeping Half-Flotilla dispatched to the Baltic Sea for operations against Finland. The ships of the line "Posen" and "Nassau" as well as the 4th Minesweeping Half-Flotilla and II Minesweeping Division followed in mid-March and were subordinate to the "Special Formation for the Baltic Sea" that had been formed in the meantime Battleship "Rheinland" returned to the High Seas Command and available for service in the North Sea. On April 11, "Rheinland" hit a rock south of the Aaland Islands and became unusable for war.

15 English barriers were laid during March. On Black Route, outside barrier 20, whose timer expired on April 1, barrier 23 was thrown by "E 51", towards the end of the month barrier 37 by "E 41" a little west of this barrier. North of Ameland, "E 41" and "E 45" laid barriers 28, 30, 32 and 34. The new Yellow Route, which was bent to the south, was closed by barrier 33 with a timer until April 29, apparently after observing our minesweeping work, while on the inner part of the Yellow Route, but before the start of the new route, barrier 24 was laid by "E 34". Above-water minelayers blocked the Middle Route with 264 mines (barrier 35) on March 28 — time arrangement until May 3. Blue Route was blocked by surface forces by barriers 29 and 31, each with 284 mines. The two time barriers 25 and 27, each with 20 mines, were laid on the Danish coastal route by "E 45" and "E 34". Far in the German Bight, west of the Amrum bank, "E 34" laid a submarine barrier in a very unfavorable position for us at the intersection of the Blue and Middle Routes; but it gave itself away by surface levels and was discovered just eight hours after it was thrown, making it ineffective.

Black Route was cleared for submarine escorts with equipment on February 16. The first convoy along this route was carried out on the night of March 1st by the 8th Convoy Half-Flotilla (Oberleutnant z. S. d. R. von Horn). The boats sailed in two groups of three boats each, the command boat "A 57" (Oberleutnant z. S. Zechlin) behind it, then the submarine "UB 34" with "Ella Ober" as a safety boat. North of Terschelling at 8:55 p.m. mines were detected by the device slipping out, probably from barrier 19 on February 22. The convoy was continued after properly pulling out until at 1:04 a.m. on March 2, the right wing boat of the front group "Hermann Siebert" struck a mine of barrier 20. ²¹¹

Losses on Black Route and Barrier 14

When the second group veered to port, the right-hand hydrofoil "Otto Schlick" also ran into a mine. There was a NE wind, force 7, rough seas, strong swells from the north, occasionally heavy snow gusts. While "Hermann Siebert" and "Otto Schlick" sank, the other boats ran back in keel line to "UB 34" after the crew had been rescued. The "A 57" and "Oevelgönne" hit mines at the same time and sank. All steamers anchored. It was possible to save 72 men with dinghies, a boat with 5 men drifted away and later landed in Holland. The losses were: "Hermann Siebert" 7 dead, "Otto Schlick" 10 dead, "A 57" 12 dead, "Oevelgönne" 26 dead. When the wind picked up to a storm and the boats could no longer stay at anchor, the commander of the half-flotilla, who had first called for motor boats to provide assistance, decided to march back, which was completed without any problems.

The Black Route was closed again, a 3 nm wide path for U-boats should now be created south of the Yellow Path. First of all, the general situation had to be checked and a provisional route had to be identified by driving to the restricted area border. The advance made by the III Minesweeper Flotilla on March 9th led to the remnants of older barriers and barrier 24 laid on March 5th being found. The previously undiscovered dummy barriers 11 and 13 were pushed past. During the subsequent spatial work to uncover the new path, "A 56" (Oberleutnant z. S. Olff) from the 8th Minesweeping Half-Flotilla ran into a mine on barrier 14 on March 12. The tow-in was unsuccessful, the boat sank in 30 minutes, 16 men were killed; Commander, helmsman and 13 men were wounded. The loss of "A 56" was initially attributed to a submarine torpedo, especially because on March 12, after a long time, an enemy submarine had been sighted in the German Bight, which was probably "E 41" (Barrier 28). The discovery of further mines of Barrier 14 on March 16 made the assumption of a torpedo shot unlikely.

Despite the detection of lock 14, the mines of this barrier still claimed numerous victims: "M 36", the command boat of the IV Minesweeper Flotilla, hit a shallow mine of Barrier 14 on March 23 and sank after 27 minutes; 17 men were wounded and 4 men were missing. During blasting work near the wreck site of "A 56" on March 27th, the outpost boat "Seefahrt ist not" (Leutnant z. S. d. R. Schneider) ran 500 m south of the wreck on a mine and sank near the wreck of "M 36" with the loss of 6 men. While searching the scene of the accident on March 29, the mine clearance boat "F 32" of the VI mine clearance division ran into a mine and sank with the loss of 7 men.

When the mother ship "Borkumriff" of the 6th Mine Sweeping Division set sail on the new southern Yellow Route to lay out a buoy, it ran into a mine at Barrier 24 on March 19, but could still be towed to the Ems. The mine had not been found during the previous search work. On the same day, enemy submarines were reported off the Ems and west of it near the working area of the new Yellow Route. 212

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The work on this route had aroused the interest of the enemy, because on March 21, while the minesweepers were working, flying boats with the plane "1691" appeared west of Borkum off the Ems, which were fired on by the "A 53". The nearby picket boat "Georg Rhode" was hit by machine gun fire from one of the flying boats. Fighters took off from Norderney and Borkum to defend themselves. On March 23, west of barrier 13, the 6th Minesweeping Half-Flotilla (Kapitänleutnant d. R. d'Ottilie) ran into barrier 33, which was thrown by English destroyers at midnight on March 22-23. About 15 surface levels were counted and further mines under water observed. Only with the greatest skill of the commanders was it possible to get the boats out of the shallow mines. The command boat hit the ship's side and the screw against a mine without detonating it. That one too 1st Minesweeping Half-Flotilla (Kapitänleutnant Gebhardt) working further south ran into the same barrier since the commanders to get through the narrow minefield. At 12:23 p.m., "M 40" (Leutnant z. V. d. R. Biermanns) hit a mine and immediately sank, losing 7 dead, 3 seriously wounded and 8 slightly wounded. The powerful detonation threw the aft gun overboard and the sinking took place so quickly that it was no longer possible to walk alongside. Further mine detonations occurred as a result of the first mine detonation and the narrowness of the minefield. The exemplary attitude of the people involved in the rescue, as well as the crew of "M 40" is to be emphasized.

Work on the newly found barriers 13 and 33 was briefly interrupted because on March 24 one or more enemy submarines, probably among them "E 45" (barrier 34), were sighted west and north of the Ems. At 8 p.m. 20 nm north of Terschelling, aircraft "1691" (Norderney) sighted a submerged submarine and bombed it. In the vicinity of "Friedrich der Große", which was north of the Ems with the IV Squadron to secure the minesweeping work at sea, "B 97" clearly observed a torpedo runway running behind the stern. "Großer Kurfürst" had also noticed a submarine attack. "B 97" had thrown two depth charges on a clearly visible diving spot in the submarine security after looking through two periscopes and clearly observed oil stains, further reports received this morning indicated the presence of close at least three enemy submarines. All minesweepers were assigned to hunt for submarines; in the afternoon the Norderney aircraft "1690" and "1691" threw bombs at an enemy submarine about 45 nm W by N of Borkum.

In preparation for our own blocking measures, the paths under the coast had to be searched thoroughly. The III minesweeper flotilla (Kapitänleutnant Wolfram) found barrier 32 on March 26th. During work on the same day, the stern of "M 53" ran into a mine north of Ameland. The three aft compartments were full, the stern was dented, but the boat held its ground and was initially underpinned until the engine room bulkhead was well secured.²¹³

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Closure of "Blue" Route

The boat could be towed. During the subsequent search work, mines at barriers 28, 32 and 34 were identified and cleared.

At the beginning of March 1918, Blue Route was primarily available for the Uboat escorts. Middle Route was not yet completely cleared, the minesweeper flotillas had been dispatched to complete this way earlier in the month. U-boat escorts could not use the Blue Route at the beginning of March due to rough seas, so the U-boats were escorted across the Baltic Sea until March 13. Since the end of February reports had accumulated that the enemy had laid 1 to 3 mines in the neutral channel between the buoys. Allegedly, loggers had hit mines several times, sighted and fished mines, and English warships were said to have been observed laying mines between buoys 1 and 3. The news was in fact incorrect, but since contamination of the neutral channel was not entirely ruled out, Fleet Command decided to turn the outer part of the Blue Route north and have outer parts of the route to Dogger Bank North controlled by lightships. In order to clarify the situation, the 4th Minesweeping Half-Flotilla (Kapitänleutnant von Zitzewitz) made a quick voyage in the direction of buoy 3 on March 9 and got caught in barrier 22 to the east of buoy 3 heavy mine hit just below the waterline on the port side. The boat was undermined by "M 70" (Oberleutnant z. S. d. R. Emde) and "M 92" (Minensteuermann Stoldt) within 30 minutes and by 5 a.m. on the 10th. March towed on an easterly course, then "M 91" had to be abandoned. When the mine was hit, 3 non-commissioned officers and 5 men were killed, 3 men were slightly wounded.

The next night, the 3rd Minesweeper Half-Flotilla carried out a quick voyage in the direction of buoy 2 without having found barrier 21. Blue Route was then released and the B. d. A. ordered that the special group of the North Sea Outpost Flotilla should guard the path as regularly as possible and for this purpose should stand up and down the inner part of the path up to 046 α at night. On the night of March 14th and 15th, 1st S Group, hampered by fog and rough seas, was so far inland that English destroyers were able to lay barrier 29 unnoticed. War lightships lying in the outskirts observed Morse code and masthead lights in the west at 1:45 a.m. on March 15, but believed that they were lights of the 3rd Minesweeping Half-Flotilla, which was on a U-boat escort, but this was still a long way off at the time in the North. On an escort trip on March 15, which the 10th Escort Half-Flotilla (Kapitänleutnant d. R. Rammelsberg) carried out with "UB 21" via Blue Route, "Greta" (Leutnant z. S. d. R. Topp) ran around 5:40 p.m. struck a mine at barrier 29 and sank within 30 seconds. Numerous mine surface stands have been observed. The trawler "Goldbutt" (helmsman Bornhold) behind "Greta" launched the boat and tried to save the people. As a result of the wind and sea state — ESE 8, sea state 6 the boat drifted away and could no longer be salvaged. "Goldbutt" remained at the scene of the accident, the convoy with "UB 21" led by Leutnant z. S. d. R. Keßler to march back.214

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The next evening, "Goldbutt" had to leave the scene of the accident without having recovered his cutter. Torpedo helmsman II Lorenzen and 3 men had given their lives to save the comrades. "Greta" was left with 29 men including the commander.

Since this only route had also turned out to be blocked, the U-boats had to be guided back across the Baltic Sea until, on March 17, the Middle Route could be opened again after it had been found mine-free by quick run. On March 19, 21, and 22, U-boats were brought out via Middle Route without having taken hold of the dangerous barriers 17 and 18. At times, the U-boats had to go back through the Baltic Sea because the rough sea meant that no escort was possible for several days.

On the night of March 27th and 28th, the English mine-launching group "Abdiel" with the destroyers "Legion", "Telemachus", "Ariel", "Ferret" and "Vanquisher" stood near the launching site at dawn in poor weather Barrier 35. She sighted three armored trawlers lying at anchor at 250 m: the North Sea outpost flotilla, whose cannons were covered with tarpaulins and where, apart from a light signal, no life was noticed. They were the outpost boats "Polarstern" (Leutnant z. S. d. R. Buchheister), "Scharbeutz" (Steuermann d. L. Niemczyk) and "Mars" (Steuermann d. S. II Berndsen), laid out as Kralegs light ships. The destroyers approached the completely surprised outpost steamers, which the English destroyers had initially mistook for boats from an escort flotilla that had left the evening before enemy artillery fire destroyed them. The crews were captured and taken on board with difficulty in rough seas - wind 5W 6 to 8 with corresponding sea conditions. Neither the 12th Torpedo Boat Half-Flotilla, which went in search of the missing boats, nor the dispatched aircraft were able to ascertain any further details.

Another night cruise with the 2nd Escort Half-Flotilla and the 14th Torpedo Boat Half-Flotilla on March 29 should decide the best way to cover Middle Route with time mines. According to orders, the 14th Torpedo Boat Half-Flotilla (Kapitänleutnant Beitzen, Richard) drove to point 5 behind the 2nd Escort Half-Flotilla (Kapitänleutnant d. R. Boy-Ed). At 1:27 a.m. on March 30, the two half-flotillas separated, and the 14th Half-Flotilla headed for 061 α. The flotilla, whose equipment had slipped out several times, turned around at 2:50 a.m. in 062 B, picking up the equipment, and began to march back, but did not see "S 19", which was supposed to be up and down in 064 ß in the morning for control. At 4:02 a.m. the command boat "G 87" (Oberleutnant z. S. Komorowski) received two mine hits in quick succession behind the bridge. These were Barrier 35 mines. The forecastle was torn down as far as boiler room II and immediately sank away. A huge flame burned out of the rear chimney, which was still standing, and burned until the boat sank, illuminating the scene of the accident as bright as day. The rest of the crew gathered on the stern; and after the loss of all naval officers, naval chief engineer Aled took over command. "G 94" (Kapitänleutnant Haushalter) tried to go alongside "G 87" after the smoke had cleared a bit. 215

Page 201 Sinking of the 14th Torpedo Boat Half-Flotilla

Shortly after "G 94" started to walk alongside, a mine explosion also occurred on "G 94" between the front and aft turbines. The torpedo boat anchored and it was found that the fore and aft turbine rooms were full of water. After anchoring, the commander sent the dinghy and the cutter to "G 87" to pick up the crew. The weather was calm, but long swells from the west soon showed that they were washing over the "G 94", which was low at the back, more and more and would depress.

"G 93" (Kapitänleutnant Reimer), which was furthest to the rear, saw in the searchlight that "G 94" was shrouded in steam, several people were swimming in the water and there was a surface stand 70 m ahead. With the intention of going alongside the apparently badly damaged "G 94" and recovering the crew, the commander tried to drive as hard as possible past the sighted surface level, but when he had passed it about 30 m away with the bridge, the result was the same also on "G 93" an explosion. The mine had hit the boat between the starboard turbine rooms. Both turbine rooms immediately filled with water, the deck was completely warped, split like corrugated iron and ripped up amidships. The aft mast had snapped off halfway up, the broken portion thrown overboard and hanging with the rigging on the starboard propeller guard. Immediately after the boats were released, they anchored and the seriously wounded were sent to "G 92"; passing people from "G 87" and "G 94" were picked up by the dinghy to the aft was impossible after a short tent, supporting the neighboring compartments was hopeless. The fore and aft ships were only hanging together because of the badly damaged upper deck. The boat worked hard in the long swell. The commander decided to take his crew to the 2000 m away to bring the lying "G 92" (Kapitänleutnant von Killinger, Arthur) and to give up the rescue of the crew of "G 87", which burned at high flames until it sank, until his own people were secured.

"G 94" also had its wounded, then other parts of the crew brought to "G 92" by cutter and dinghy. Since in the meantime the bulkheads were breaking down to the forward boiler room, the commander assembled the crew on the forecastle and gave the order: "All men overboard", after giving three cheers for the sinking boat and the Kaiser. At 5:40 a.m. "G 94" lay down over to starboard, then stood upright with the stern in the air and sank. The mine hit killed 8 men and wounded 8 men. 5 more men drowned in the water, including the helmsman of the boat, torpedo helmsman Fischer. A number of people who had jumped overboard from "G 94" swam towards "G 93" and were taken on board there.

Shortly after 6:30 a.m. the situation of "G 93" became very critical. The list had increased considerably, people could only get into the boats with difficulty. The commander therefore ordered the crew, as far as they were still on board, to keep clear to jump overboard. As the water entered the boiler rooms through the fan heads, Kapitänleutnant Reimer gave three cheers to the Kaiser and gave the order:²¹⁶

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"All hands aboard". Immediately thereafter, the forecastle stood up and down and then slowly went down with waving flag and pennant to the cheers of the crew in the water. The boat lined up with the stern hit the bottom and was held up close under Nasser by the air-filled forecastle, which was still undamaged, with the bow up. The next morning, the war flag and pennant set in the forecastle top were still clearly waving out of the water. When the mine was hit, "G 93" 2 deck officers, 3 non-commissioned officers and 5 men killed. The chief engineer, Naval Chief Engineer Bettenhauser, 1 non-commissioned officer and 3 men were seriously wounded, 1 non-commissioned officer and 2 men were slightly wounded.

It had not been possible to anchor on "G 87" because the entire forecastle had been knocked away. As a result, the wreck continued to drift away, so that maintaining contact with the rescue of the remainder of the crew of "G 87" became more and more difficult. The boats of "G 92" did their best to get the survivors down from the blazing "G 87" as well as from "G 94" and "G 93". With the approximately 2 nm strong current and high swell, it was above all for the Leutnants z. S. Luchting particularly difficult to rescue the crews on seven trips. The dinghy also took part in the rescue work, it was rowed alone by torpedo boatswain's mate Zimmermann, seaman's number 2 of "G 92". The Torpedo boatswain's mate Zimmermann managed to right the dinghy, which was overloaded with 8 rescued people from "G 87" and capsized, and picked up those who were swimming in the water again. The dinghy later capsized again, but now there was no strength to right it again. It was only after about 20 minutes that the completely exhausted boatswain's mate Zimmermann was picked up by the cutter "G 92", which freed itself from the mines by passing the recognizable surface stands that were close together. Shortly after the last people of "G 87" had disembarked, an oil bunker explosion happened; after about two hours of drifting, the wreck sank at 6:20 a.m. with a tremendous flame. All seriously injured had been recovered; 5 officers, including the half-flotilla commander, Kapitänleutnant Beitzen, Richard, and the commander of "G 87", Oberleutnant z. S. Komorowski, 1 upper deck officer, 6 non-commissioned officers and 31 men were killed.

"G 92" was sailing in a steep starboard echelon closely behind "G 87" when "G 87" mine exploded. Both boats were initially enveloped in a huge cloud of fire, smoke and steam for a few minutes. Countless debris whirled through the air, the middle deck of "G 92" was washed over by a sea several meters high. "G 92" veered hard to starboard, the boat was brought to a standstill. "G 92" veered hard to starboard and the boat was brought to a standstill. While attempting to go alongside to get the survivors off "G 87" as quickly as possible, Kapitänleutnant von Killinger received from the half-flotilla doctor, Mar. Assistant Doctor d. R. Dr. Simon, by shouting, the report that there were surface stands behind the stern of "G 92". Dr. Simon had seen the mines very close to the starboard side when passing the barrier without this warning probably none of the whole half-flotilla would have come back.²¹⁷

Rescue work in minefield

After the mine detonations on "G 93" and "G 94" in quick succession, "G 92" gave up the intention of going alongside. The boat was brought to anchor after the cutter and dingly had been thrown out immediately next to "G 87". Among other things, Kapitänleutnant von KillInger stated in his report: "In the following hours up to 7:15 a.m., the first 1½ hours of which was in complete darkness, the boat crews did an outstanding job in rescuing the survivors of the three damaged boats. Particularly noteworthy here is the cutter of "G 92" under the excellent command of Leutnant z. S. Luchting ... The cutter officer was significantly supported by the seaman's number 1 of the boat, Torpedo Boatswain's Mate Bolloff, who, by using an extraordinary amount of energy and drive with full commitment of his person, achieved almost superhuman things with his boat guests ... The number 2 of the boat, torpedo boatswain's mate Zimmermann, excelled in the same way. The crews of all other rowing boats also did an excellent job, especially the cutter of "G 94" under the command of Lieutenant Z. S. Hagemann. Only in this way and because the crews of the sinking boats were led by their captains ("G 94", Lieutenant-Captain Hauser, "G 93", Lieutenant-Captain Reimer, "G 87" under the sole surviving officer, Chief Naval Engineer Aled) and their officers maintained an almost exemplary calm and order, it was possible to save almost all of the boats lying far apart who had been spared the mine detonations. Also to be emphasized is the tireless work of the semi-flotilla doctor, Mar. Assistant doctor d. R. Dr. Simon and his staff, who, despite the very primitive sanitary facilities on the torpedo boat, managed to bring all the wounded and many of the almost completely frozen through and kept many half-frozen alive by trying to revive them, to which the camaraderie and efforts of each individual greatly contributed."

The work of rescue had been favored by a complete calm. Fog only set in around 7 a.m., shortly before the two cutters of "G 94" and "G 92" wanted to board "G 92" with the last rescued and after "G 93" was the last boat to sink. At 7:15 a.m. all boats were alongside except for the cutter of "G 93", which had been rowing under the command of Kapitänleutnant Hausher in the direction of the approaching 2nd Escort Half-Flotilla.

The 2nd Escort Half-Flotilla (Kapitänleutnant d. R. Boy-Ed) had received the FT report from "S 19" at 4:35 a.m. on March 30 that enemy destroyers had encountered mines in 072 ß corrected the radio message sent by "G 92" at 4:05 a.m., which reported that "G 87", "G 93", "G 94" had encountered mines in 072 β , needed help and had anchored. The 2nd Escort Half-Flotilla approached the scene of the accident at full speed, arrived there in very hazy weather at 5:30 a.m. and anchored about 1000 m from the scene of the accident. They dispatched all the cutters and dinghies and by 9:50 had picked up a total of 1 officer and 28 men of the 14th Torpedo Boat Half-Flotilla. When it cleared up at 4 p.m. on March 30, Kapitänleutnant d. R. Boy-Ed suggests that "G 92" should try to get out of the barrier while slipping the anchor over the stern. 218

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However, at 5.45 a.m. Kapitänleutnant von Killinger had asked for a shallow minesweeper unit to be brought out of the barrier. Given the complexity of the minefield and in view of the large number of crew members of the Half-Flotilla on "G 92", it was advisable to await its arrival. In the meantime we were aground the radiotelegraphic reports of "G 92" "Emden" with 11th and 12th Half-Flotilla, IV AG, "Moltke" and "Hindenburg", 1st division, 2 pump steamers, 1st Minesweeping Half-Flotilla and VI Minesweeping Division went to sea. The Fog, only occasionally interrupted by haze, forced anchoring several times; towards evening the cover forces advanced on March 30 had worked their way to the scene of the accident. The VI Mine Clearance Division (Korvettenkapitän Bade) deployed clearance boats from the mother ship "Trische" at 7 a.m. on March 31; the swell had increased in the meantime, wind SE between 5 and 7, gusty. At 7:45 a.m., "G 92" weighed anchor and steered out of the barrier behind the mine clearance division after the boat had been in the minefield for 28 hours. At the request of the crew and the rescued, Kapitänleutnant von Killinger gave three hoorays to "G 92", to the comrades of the VI. Mine Sweeping Division, whose boats were sometimes completely submerged by the overflowing seas.

The heavy loss of the three torpedo boats had made it clear how great the danger of the increasingly frequent shallow mine barriers was to deep-penetrating vehicles. There was a limit to the possibility of determining mine-free routes by torpedo boats stabbing. The fleet command decided to find a new route in the north as quickly as possible and to protect it with their own mines. The task was started immediately. After sighting of new surface levels west of the Amrumbank, the middle route was turned southwards, the designation was relocated, and the blue route was also relocated. The previously undiscovered barrier 36, laid on March 29, happened to stay out of the way.

At the beginning of April, the B. d. A. proposed new submarine routes, in which a basic distinction was made between routes for entering and exiting. Two new outlet routes were tackled: route 200 between middle route and yellow route, route 300 between route middle and route blue. The third proposal, to create a new route past Hornsriff by breaking through their own barrier, was dropped because the clearance work on the Hornsriff barrier required too much time and the work output would not have corresponded to the existing mine clearance equipment. Path Yellow (Path 100) and Path White (Path 500) were retained for entry. In the future, the number of routes should be kept as low as possible and they should be spread as far apart as possible. Using different paths for ingress and egress was expected to reduce compromise.

Despite the bad experiences with the Hornsriff barrier, the events of the last few weeks had shown the need to make it more difficult for the enemy to lay out new barriers in certain areas and to seal off important routes for one's own use, at least for certain times.²¹⁹

Plan for a protective barrier

The penetration of English submarines into the inner German Bight, the attack on the three outpost boats "Polarstern", "Scharbeutz" and "Mars" as well as the constantly increasing systematic approach of the enemy in blocking newly cleared paths finally allowed the idea of protective barriers to mature it was to be hoped that the minesweeping work would be secured more strongly than before by means of our own mine barriers. First, time mines were used to create a cross bar on the Dutch coast against further penetration by enemy submarines. Cruiser Bremse (Fregattenkapitän Westerkamp) took 604 mines on board on April 1, 1918, while the approach road, the restricted area and the restricted course were thoroughly searched by minesweepers. On April 2 between 2:34 a.m. and 3:34 a.m. the barrier was thrown at longitude 5° 34' E between 53° 31' N and 53° 40.6' N, depth 12 m below mean spring low tide, timing 21 days, mine spacing 30 m.

In order to prepare the protective barrier for the Yellow Route, this road had to be searched. While this work was being carried out by the 7th Minesweeping Half-Flotilla (Kapitänleutnant Nerger), the 1st Minesweeping Half-Flotilla (Kapitänleutnant Gebhardt) made a night voyage to the west from the working area of the 7th Minesweeping Half-Flotilla. At 9:19 p.m. 153 γ on 2 April, the 1st Minesweeping Half-Flotilla spotted a larger, darkened vessel about 2 nm to the north-west, which was steering a north course at low speed and was addressed as an enemy light cruiser. The half-flotilla turned to an easterly course, picked up the device and slowly ran off to the east. The enemy, apparently in contact with two vehicles, came out of sight before the II.A.G., which had been sent to meet them, had approached. "A 37", which had been laid out as a Markboot on the approach, had sighted light signals and several boats about 2 nm away, which "A 37" initially took for its half-flotilla; later two larger warships were spotted at a greater distance, but soon lost sight of again. The vehicles had been "Abdiel" with four destroyers, which had thrown barrier 40 (238 mines) at midnight from April 2nd to 3rd; carried out airship security to the west was unfortunately broken off about the length of Terschelling despite favorable airship weather and was not continued until dusk, so that the advance of the English mine throwing unit and the approach to the German minesweeping units active in the outskirts could not be detected. The English minesweeping formation had seen nothing that night apart from two fishing vessels, so that the formation of the 1st Minesweeping Half-Flotilla to have been pursued by the English was erroneous.

Further search and reconnaissance activities on April 4, in which the aircraft mother ship "Santa Elena" also took part with two aircraft, did not lead to the implementation of the mining operation on that day either, as fog entered and forced anchoring. The attempt made the next day to carry out the mine throwing by mine layer "Kaiser" was prevented by the appearance of mines. It was not possible to force the barrier - it was the dummy lock 11 - with the fully loaded mine ship. The Fleet Commander dropped the task at first because the Yellow Route seemed blocked for the time being; the bogus barrier had served its purpose well. ²²⁰

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Shortly after the operation was broken off, "Abdiel" again ran into the German Bight with five destroyers and threw barrier 42 at midnight.

Now the protective barriers in the north (protection for the Yellow Route and the new Blue Route) were to be thrown by the cruiser "Arkona" (Korvettenkapitän Peucer) and the cruiser "Bremse" (Fregattenkapitän Westerkamp) after the mines had been taken on board by the auxiliary cluster mine steamer "Kaiser". Also alarming reports of enemy submarines north of the Lister low and even near Helgoland, which later proved to be erroneous, urged caution. During an attempt on April 10, the 3rd Minesweeping Half-Flotilla (Kapitänleutnant von der Marwitz) escorting the "Arkona" ran into the north wing of the sham barrier 7, so that the cruiser had to be guided back; "Bremse" with the 5th Minesweeping Half-Flotilla (Kapitänleutnant Glimpf, Friedrich) carried out the task. The mine alarm had also been given on this one, namely at sham barrier 26. "Brake" turned around; with newly deployed equipment, the advance was now carried out without any problems, partly in dense fog and with searchlights turned on, wind NE 4 to 5. The equipment of the 5th Minesweeping Half-Flotilla slipped out several times, although the reason was not initially clear. The "Bremse" threw the commanded barrage 9 nm in length through squares 022 and 023 α from 2.16 a.m. to 3.21 a.m. on April 14, 150 mines timed for 20 days, depth set 2 m below mean spring low tide.

The march at night, in thick fog, strong winds and high seas behind a minesweeper unit with deployed equipment represented a special achievement. The seamanship and dedication of the commanders and boat crews, in particular the group leader and commander of "M 60", Oberleutnant z. S. Zechlin, during this 24-hour search trip received special recognition. The commander of the "Brake" stated in his war diary: "The task was only possible due to the excellent work and the very good driving of the 5th Minesweeper Half-Flotilla. The half-flotilla had reached the limits of its capacity after the wind and sea conditions." The will to carry out the task on the part of the commander of the "Bremse" (Fregattenkapitän Westerkamp) with the mine-loaded cruiser is no less noteworthy.

Cruiser "Arkona" (Korvettenkapitän Peucer) set sail on April 13 accompanied by the 11th Torpedo Boat Half-Flotilla (Korvettenkapitän Rümann, Wilhelm) in order to carry out the postponed mine task. The minesweeping backup was provided by the 2nd Minesweeping Half-Flotilla (Kapitänleutnant Rother). This operation was also carried out in rough seas, NNW 6 to 7, and with low visibility. Driving with gear was associated with great difficulties when the boats were lurching by up to 15° and yawing strongly. When a boat's equipment was knocked off by heavy seas, it was only possible to connect the lines and deploy the equipment if the boats were fully deployed. The 10 nm long barrier was thrown between 11:04 p.m. and 11:27 p.m. on April 13 and between 1:10 a.m. and 1:43 a.m. on April 14 from 027 α (55° 12' N, 5° 19' E), starting in a northerly direction, 150 mines timed for 20 days, depth set 2m below mean spring low tide. 221

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Laying out the "Arkona" barrier

Because the equipment had slipped out, the throwing had to be temporarily interrupted and the ship held in place; the 2nd Minesweeper Half-Flotilla again sat down with equipment in front of "Arkona", they drove 15 hours with equipment in partly heavy seas. The excellent leadership of the boats and the perseverance of the chief of the 2nd Minesweeper Half-Flotilla was, just like a few days earlier with the 5th Minesweeper Half-Flotilla, a top performance of experienced leaders and crews. The fresh spirit and the tireless zeal of the "Arkona" crew under their energetic commander, Korvettenkapitän Peucer gave the cruiser the appreciative signal: "Bravo Arkona! Fleet Commander."

On April 19, four boats of the III. Torpedo Boat Flotilla, "V 71", "V 73", "S 55", "G 91", to Flanders. The convoy was taken over by the 8th Minesweeping Half-Flotilla (Kapitänleutnant Koellner), reinforced by "M 30". The four boats left Helgoland at 8:45 a.m. on April 19 on Yellow Route. "Moltke", "Derfflinger", the IV AG and the 12th Torpedo Boat Half-Flotilla advanced to 029e, where they stood up and down until nightfall. When the escorted boats were advancing, a device slipped out at 18:16 in the area of Barrier 33 $(088 \, \epsilon)$. It was possible to circumvent the suspected barrier to the south. Numerous surface stands that may have belonged to barriers 33 and 42 were passed. At 9:25 p.m thrown dummy barrage 47 and dummy barrage 11. After the formation had encountered mine barriers for the third time, the commander of the III Torpedo Boat Flotilla (Korvettenkapitän Gautier) broke off the attempt to break through, especially since the boats had stopped in Zeebrugge could not reach in the dark. While marching back behind the 8th Minesweeping Half-Flotilla, "M 95" (Oberleutnant z. S. d. R. Senz) came across a mine shortly after midnight. The boat was torn open amidships and quickly sank over the bow. The formation was up Barrier 42 had come through, which had probably already been crossed on the approach in the gap between two barrier parts. The commander of the half-flotilla (Kapitänleutnant Koellner), who had been standing in front of "M 95", turned around with the command boats "M 64" and "M 39" (Oberleutnant z. S. d. R. Ivens), to accommodate the crew of "M 95". During the rescue work, "M 39" encountered a mine with the forecastle. "M 64" went alongside and took over the crew and the rescued. While the half-flotilla commander wanted to drive back to the half-flotilla, the forecastle of "M 64" also hit a mine. The forecastle caught fire and the boat slowly sank over the bow. "M 39" could not be brought in either. The other boats - "M 30", "M 58" and "M 41" - as well as the torpedo boats had anchored in the meantime. Despite the rolling in the swell, "M 30" got its rowing dinghy into the water. This and the cutters of the torpedo boats saved a large part of the crews " and "M 64", the Oberleutnante z. S. d. R. Senz and Ivens and Lieutenant z. S. von Klocke, also 2 officers, 4 deck officers, 17 non-commissioned officers and 60 men.²²²

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The boats of the III. Torpedo Boat Flotilla was to the west, the M-boats to the east of barrier 42. The radio message from the III. Torpedo Boat Flotilla ran the 6th Minesweeping Half-Flotilla (Kapitänleutnant d. R. d'Ottilie) with the chief of the III. Minesweeping Flotilla (Kapitänleutnant Wolsram) and the VI. Mine Clearance Division (Korvettenkapitän Bade) with the mother ship "Tischen" (Kapitänleutnant d. R. Kirchhof). The IV arrived there at 7 a.m. on April 20. The I. F.d.T. on "Emden" had joined the IV. A.G. at 11:20 a.m. coming from Schillig. The tops of the masts of the M and T boats about 10 nm away were seen. The cruisers stood up and down here until late afternoon, east of them two battlecruisers, later taken over by ships of the III. Squadron were relieved. The 6th Minesweeping Half-Flotilla and the VI. Mine Sweeping Division began in the course of the afternoon to approach the boats lying at anchor. The three M-boats lying to the east of the barrier had meanwhile weighed anchor at high tide at 11 a.m. and were reported to the Chief of the III. Minesweeper Flotilla. After reporting on the situation, they were released to hand over the wounded. Meanwhile "Trieschen" anchored in a strip searched by the 6th Minesweeping Half-Flotilla, while the four available clearance boats worked their way west in front of the 6th Minesweeping Half-Flotilla, clouds of smoke in sight in WSW. The chief of the III Torpedo Boat Flotilla, who concluded that there were enemy cruisers or destroyers, immediately had the four T-boats weigh anchor and attempted, swinging in a wide arc to the south, the barricade on which three minesweepers had passed during the night had sunk and on which the mine clearance division had evidently found mines. The barrier was passed without incident. Shortly after the clouds of smoke were seen, five English destroyers were spotted. A passing battle developed on the starboard at 70 to 90 hm in which the III Torpedo Boat Flotilla believed to have observed hits and had meanwhile set an easterly course and had become foggy. Korvettenkapitän Gautier, who had joined the minesweeping division, turned to protect them and headed for the enemy; again a passing battle developed on starboard at 70 to 90 hm. An enemy destroyer sank after observation of the III. Torpedo Boat Flotilla listed astern after apparently taking two hits. When the III Torpedo Boat Flotilla got back to the mine barrier, the distance from the enemy had increased. Korvettenkapitän Gautier did not want to pass the mine barrier again to the west, considering mine casualties to be likely and the enemy gradually coming out of sight to the west; at the same time he received the order from the leader of the IV. A.G. to immediately approach the cruisers. The battle ended at 6:59 p.m. after consuming 312 rounds of ammunition. In the meantime, the IV. A.G. had advanced at high speed to the surface stands, and the ships of the III. Squadron (on behalf of Vice-Admiral Kraft) were not without the risk of getting into barrier 33 outside the searched strip. ²²³

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Battle of the III. Torpedo Boat Flotilla

By breaking off the battle and joining the III. Torpedo Boat Flotilla, the advance came to a standstill.

The M-boats had run into what was at the time the furthest outward sharp barrier; the conspicuous encounter with the enemy in the middle of the mine area can be explained by the fact that barrier 11, which was believed to be active, consisted of dummy mines. On the other hand, the III. Torpedo Boat Flotilla had a brief engagement with an enemy flying boat at noon on April 20, before minesweeping began, so that enemy counteraction was to be expected. In addition, an enemy submarine was reported by aircraft "1814" from the Norderney seaplane station at the border of the restricted area west of barrier 42 in the morning and bombed. The own air reconnaissance to the west was only assigned to the "L 56" standing in the security between Doggerbank north and south lightship on the morning of April 20th. With changing visibility, the airship had hardly made any headway against a strong southerly wind, had broken off reconnaissance far north of the area in question at around 4:30 p.m. and had arrived. A plane standing in the western defenses had to make an emergency landing and failed to provide reconnaissance. Air reconnaissance did not provide the operational security for more farreaching operations that was often assumed.

The transfer of the four boats of the III. Torpedo Boat Flotilla was initially scheduled for early May.

The U-boat convoys had used the White Route in April, along which five convoys had been made between April 5th and 10th. As a result, the route north of the Nordmannstief was blocked on April 11 at night by "Abdiel" and two destroyers with 158 mines (barrier 44). Initially, further U-boats were directed via the blocked White Route without any casualties occurring. Barrier 44 was discovered on April 21, when the outpost group of the 1st North Sea Outpost Flotilla (Kapitänleutnant d. R. von der Heide) encountered mines on the return march from the recovery of an aircraft at 1:30 a.m. Outpost boat "Emma Oetken" ran in the wake of "Steinbutt" (Leutnant z. S. d. R. Pusback) on a mine of barrier 44 and sank with the loss of 16 men. "Steinbutt" anchored at the scene of the accident, fished out 10 survivors, weighed anchor at 7 a.m. and got free from the barrier without the help of the 3rd semi-minesweeper flotilla, which had left the sea in the meantime.

In April, the enemy laid a total of 21 barrages with a total of 3,436 mines, 12 of them by submarines, 9 by surface forces, including 6 barrages of 20 dummy mines each. On the Dutch coastal path, 4 barriers were thrown off Vlieland. On the Yellow Route, the outer barrier was reinforced, the Route was currently blocked. Route 200 was not yet under construction, the Middle Route had been temporarily abandoned without this Route actually being blocked. Route 300 was usable, White Route was blocked by barriers 44, 49 and 57. The Barrier 55 thrown at the Amrum bank on April 25th was soon discovered as a result of the lively fishing activity in this area. 224

6. Naval War from the German Bight to April 1918

Aerial activity

Airship and aircraft support for Naval Warfare was relatively small between January and April 1918. Aerial reconnaissance by aircraft was severely limited due to weather conditions - gale force winds or lack of visibility. In January, aerial reconnaissance by aircraft took place on 6 days, in February on 9 days, in March on 17 days and in April on 18 days. At the beginning of January 1918 the number of aircraft at the seaplane bases on Helgoland, List, Borkum, Norderney and Wilhelmshaven was 98 single-engine and 12 twin-engine seaplanes; by the end of April it had risen to 142 machines. In general, about 20 percent of seaplanes were not ready to fly. In some cases, the reconnaissance flights led to reports of mines, surface forces and submarines; Enemy submarines were repeatedly bombed. The increasingly frequent appearance of English Curtis boats in the western outskirts brought with it repeated skirmishes with aircraft from Norderney and Borkum. On March 19, at around 9:30 a.m., there was a fight between aircraft "1689" (Flight Mate Eckes, Flight First Mate Redelius) and "1598" (Flight Chief Mate Klöcker, Flight First Mate Karsten) with three English Curtis boats. "1598" was set on fire north of Schiermonnikoog and crashed. First Mate Karsten was missing, the wounded pilot Klöcker was fished out by the escort aircraft "1689"; he died after being taken to the hospital.

On February 3rd, the missing plane "1098", List, (senior seaman Rosenberger, flight attendant Schwasert) was found by a carrier pigeon report to Röm sitting on the mudflats. The plane later landed in Koresand, the crew was just like that of the plane that had made an emergency landing in Fanö "1296", List, (senior officer Leitner, flight attendant Keithe) interned.

The following further aircraft losses occurred: on February 3, aircraft "1415" (Norderney), which had already reported by F.T. on the return flight to Norderney, did not arrive in foggy weather and was not found again despite a search with outpost boats and aircraft.

On February 15, aircraft "1095" from the Helgoland seaplane station (flight mate Schröder, flight mate Teske) did not return.

On April 16, aircraft "2035" of Kampfstaffel Zeebrugge (Bizeflugmeister d. R. Frosch, Flugmech. Mate d. R. Hansen) came out of sight on the way from Norderney to Zeebrugge in the fog and was not found again.

In April, Dutch sailors were repeatedly stopped by planes from the Borkum and Norderney seaplane bases, examined and in some cases forced to leave the vehicles at gunpoint. On April 4, a Dutch sailor released several carrier pigeons when examined by aircraft "1600"; the crew had to leave the sailor.

From mid-March 1918, aircraft from the aircraft mother ship "Santa Elena" (flight station manager Oberleutnant z. S. Bruch) also took part in the tasks of the air force. ²²⁵

Reconnaissance flights

At the beginning of 1918, the following naval airships were ready for war: "L 42", "L 46", "L 47", "L 51", "L 52", "L 53", "L 54", "L 56", "L 58" and "SL 20". "L 61", which became F.d.L. on December 19, 1917 entered, became fully operational in early February 1918.

On the afternoon of January 5, 1918, two groups of airship halls in Ahlhorn caught fire for reasons that are not entirely clear. The airships "L 46", "L 47", "L 51", "L 58" and "SL 20" were destroyed the assumption of an act of sabotage has not been found. 15 men were killed in the explosion, 35 were seriously injured and 109 men were slightly injured.

By the beginning of April, "L 60", "L 62", "L 63" and "L 64" came to the command area of the F. d. L. added, so that from mid-March 1918 onwards 10 naval airships were again operational in the North Sea.

Long-distance reconnaissance by naval airships was hampered by weather reasons even more often than by the sea pilot associations. In the first three months of 1918, naval airships were only able to fly outside the outskirts of the German Bight for reconnaissance purposes on a total of 4 days, and on 9 days in April 1918. In January, they could only be used for long-distance reconnaissance for the last three days, despite the hazy weather. From February 1 to March 10, the weather paralyzed all airship activity. The fleet of naval airships, which had been reduced by the explosion in Ahlhorn, was replenished to such an extent at the beginning of February by "L 61" and "L 62" with the involvement of the training airship "L 41" that the commander of the airships, at his request from the Fleet Commander, received permission to attack England.

The multiple air raids against England by aircraft in the last weeks of 1917 had led to the further expansion of England's air defenses, in particular an unexpected German air raid by aircraft on December 18, 1917 had resulted in the introduction of noise warnings. On January 3, 1918, under Lord Rothermere, the English Air Council (Air Council) was formed to summarize the general view of all aviation experts. Full responsibility for Homeland Security remained in the hands of Lord French as Supreme Commander of England's Homeland Forces. In a report dated January 17, 1918 on the English defense program against enemy airships, Lord French stated: "The Zeppelin danger cannot yet be described as over. Great improvements in cruising speed, range and climbing ability have been achieved in recent Zeppelin designs, while at the same time their visibility has been greatly reduced by painting the lower parts of the airship's hull black. With the onset of warmer weather, renewed zeppelin attacks are likely to be expected; but with the recent strengthening of the defenses of London and south-east England, it is likely that the zeppelins will direct their attacks towards the north-east coast or towards central England."

While five air raids were carried out in January and February 1918, all of which also attacked London, the first airship attack of 1918 took place on the night of March 12th and 13th. ²²⁶

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For this attack, the naval airships "L 53", "L 54", "L 61", "L 62", "L 63' under the command of the commander of the airships, Fregattenkapitän Strasser, started on "L 62" with orders to proceed against Central England.

"L 53" (Korvettenkapitän d. R. Prölß) took off on the afternoon of March 12, heading for Flamborough Head. At 8:20 p.m. the airship was 45 nm away from Flamborough Head and headed for Hull. At 10 p.m. it was the English coast reached, the outlines of numerous searchlights stood out on the port side ahead. Korvettenkapitän Prölß took course for the searchlights and covered the area marked by searchlights with bombs. Strong resistance set in, so that further points of attack could be determined. In all, 3000 Kg explosive bombs were in dropped about 5000 m altitude. According to the English statement, "L 53" was close to the coast of Yorkshire, but did not exceed it.

"L 54" (Kapitänleutnant Freiherr Treusch von Buttlar-Brandenfels) made its approach similar to "L 53". The intended attack on one of the industrial towns further inland had to be abandoned when, at 8 p.m., the front engine failed due to a broken crankshaft. According to the commander, the English coast was reached at 9:20 p.m. approximately north of Spurn Point (Humber). The batteries at Spurn Point and Grimsby, which could be easily identified at an altitude of 4000 m with cloud protection, were bombed with 3000 kg. Several fires were observed. During the attack, shrapnel shells lying close to the ship, which shook the port nacelle considerably, were observed. Cell IX was found to be running empty, although it remains unclear whether the cell's injury was due to artillery fire or fragments of ice. According to the English statement, the bombing did not take place over land, but at fishermen armed with anti-aircraft guns, who opened fire on the airship. The return march was uneventful.

"L 61" (Kapitänleutnant Ehrlich) crossed the English coast at 10:30 p.m. on March 12 above a dense cloud cover The incendiary projectiles involved lay closely above, below and to the side of the airship. Judging by the searchlights and gunfire, these were strong fortifications at the mouth of the Humber, which were pelted with 1,500 kg of explosive ammunition. The airship then marched towards the industrial area, with no heavy cloud cover to find a target for the attack. The march back took place without incident. On the English side, no bombings could be detected from "L 61", which according to British information was marching through Yorkshire.

"L 62" (Hauptmann Manger) crossed the English coast south of Scarborough at 10:15 p.m. on March 12. The Scarborough batteries tried to catch the airship with searchlights and fired on it abandoned under completely closed cloud cover and set course for Leeds at 10:50 p.m. At midnight the airship was 9 nm northeast of Leeds, the searchlights of the city came into view. The batteries fired at the ship with incendiary rounds without the searchlights being able to penetrate the clouds. 227

Page 213 Airship attacks on England-Central on 12th and. March 13, 1918

From 12:15 a.m. the city was covered with all the ammunition, the effect could not be determined. According to an English source, the bombs from "L 62" were dropped 6 nm north of the Howden airship hangar and caused minor material damage. The retreat took place without incident.

"L 63" (Kapitänleutnant von Freudenreich) believed to make out three large bright lights as the cities of Leeds, Bradford and Halifax at 9:30 p.m. after crossing the coast. When shortly afterwards about 12 searchlights and 10 to 15 artillery pieces went into action, two of the complexes that came into view were bombed in several attempts from a height of 5100 m between 9:50 p.m. and 10:10 p.m. The impacts hit the target well. Details could not be observed due to cloud cover 6 bombs exploded in Hull city area.

The attacks from higher altitudes had made accurate targeting impossible, but the low clouds greatly reduced the effectiveness of the anti-aircraft fire. 10 planes took off against the airships that night without seeing them.

Fregattenkapitän Strasser ordered the L 42, L 52 and L 56, who had not been involved the day before, to attack central or northern England to take advantage of the favorable weather conditions.

"L 42" (Kapitänleutnant Dietrich) rose at 1:15 p.m. on March 13 and headed for the English coast north of Hartlepool via Doggerbank South. At 5:10 p.m. an enemy ship formation with at least 16 vessels came into sight abeam about 30 nm to port. "L 42" was chased and turned north. At 6:30 p.m. the enemy was out of sight and "L 42" was able to head west again. At 7:05 p.m. "L 42" again sighted port ahead at a distance of 30 to 40 nm a convoy of 6 to 8 ships, which was for a convoy was held. While "L 42" was preparing to attack, at 7:13 p.m. the F.d.L. received the order that all naval airships should come in because of the danger of right-hand winds over the north. Kapitänleutnant Dietrich had only noticed a very weak north wind up to an altitude of 4000 m and therefore stuck to his intention of attacking the convoy, but when, about 8 p.m., the English coast between Tees and Teyne came into sight brightly lit and apparently unprepared for an attack, the commander thought he should seize this favorable opportunity convoy, "L 42" turned towards Hartlepool and occupied the port facilities of this town with the entire bomb ammunition. The bombs landed well on target. The attack was totally unexpected; the defense only began after half the bombs had been dropped. The headlights were weak, but could mostly cut through the light haze. The brief but extremely violent defense completely covered the airship, which was moving at 5000 m, with incendiary projectiles and shrapnel without achieving any hits. 21 bombs fell on West Hartlepool killing 8 and wounding 39. "L 42" was spotted by a blocking aircraft and was unsuccessfully pursued up to 40 nm seaward. Two British anti-aircraft aircraft crashed on landing that night. The return march went without any special incidents. 228

Page 214 6. Naval War from the German Bight to April 1918

"L 52" (Oberleutnant z. S. Friemel) and "L 56" (Kapitänleutnant Zaeschmar) responded to the recall order of the F. d. L. and landed back in their home ports in the night of March 13/14.

On April 12, in the first hours of the afternoon, "L 60", "L 61", "L 62", "L 63" and "L 64" rose with orders to attack "England mid industrial area". Fregattenkapitän Strasser led on "L 63". At about 9 p.m. the target of the attack was extended by radio telegram to "England South"; London was not to be attacked unless specifically ordered.

"L 60" (Kapitänleutnant Flemming) crossed the English coast on the south bank of the Hum at 9:05 p.m. and headed for the attack on Leeds. The loosened cloud cover over the Humber and glare over Hull and Grimsby had given the opportunity to determine the exact location. At 9:32 p.m. the airship came under lively fire from flares and incendiary projectiles; at an altitude of 5200 m, the fire was above or at the same level as "L 60", which dropped all the ammunition, 3000 kg of high-explosive bombs and 120 kg of incendiary bombs within the batteries arranged in a large semicircle. According to the English statement, "L 60" was south of the Humber, most of the bombs are said to have fallen on East Halton and Thornton. The return march took place under heavy shelling while passing the English coast without further incidents.

Approaching the English coast, "L 61" (Kapitänleutnant Ehrlich) came under long and heavy fire at around 9:10 p.m. from a chain of outposts lying north-south off the mouth of the Humber. At around 10 p.m. the coast was crossed and Sheffield was headed for Searchlights and firing batteries were encountered several times. The cloud cover was almost completely closed, orientation by sight was not possible. Kapitänleutnant Ehrlich believed that he had Sheffield under him from the numerous defense systems and extensive lights, and bombarded the easily recognizable place between 11:15 p.m. and 11:35 p.m. According to English information, "L 61" passed south of Sheffield and appeared to be heading for Liverpool. A bomb was dropped on Wigan around 10:30 p.m.; the blast furnaces burned brightly because the city had not received an air warning. Other bombs fell on Aspull, Little Hulton and Radcliffe. The air raid carried out by Kapitänleutnant Ehrlich was described by the English as particularly daring. The commander did not know, however, how far west he had actually advanced, how close he was to Liverpool, and that he had dropped his bombs in the western industrial area, well west of Sheffield. "L 61" turned around at 11:40 p.m. and was heavily fired upon when crossing the coast at 1 a.m. on April 13 by shore batteries and at 2:30 a.m. by outpost forces. At 5:46 a.m. an aircraft flying towards the airship was avoided by turning and gaining altitude. Despite the failure of four engines, the march back was carried out without any particular incidents.

"L 62" (Hauptmann Manger) crossed the English coast at 10 p.m. between Humber and Wash. At 10:35 p.m. three bombs were dropped on a lighted airfield near Lincoln and explosive effects were observed reach airship. 229

Page 215 Airship attack on England South on April 12, 1918

At 11:05 p.m., a town highlighted in a ring of searchlights, addressed as Nottingham, was half bombed. Because of the cloud cover, the effect could not be observed. The defense consisting of incendiary projectiles was strong. Between 11:45 p.m. and midnight, the remainder of the bomb munitions were pelted at Birmingham with very strong defenses. However, the grenades did not reach the airship, which was at an altitude of 5,700 m. On the way back "L 62" was pursued for about an hour by a plane blocking the line Peterborough - Coventry, without the airship noticing anything. The march home was uneventful. After landing it was found that Cell IX had been punctured from above at the roof and had lost a great deal of gas.

At 10.26 p.m. "L 63" (Kapitänleutnant von Freudenreich) was over Louth south of Grimsbry north of its position in the direction of the Humber, bright lights and numerous incendiary rockets were observed. Because of the cloud cover that was closed everywhere, failure of the starboard side engine and the south-easterly winds, the onward march to the industrial area was abandoned and headed for Grimsby. Between 10:40 p.m. and 10:45 p.m. all the ammunition was dropped over Grimsby with lively defenses, without any effect being observed because of the cloud cover. According to the English statement, the bombs fell east of Metheringham, some bombs on Fleet and Little Sutton; no incidents on the way home.

"L 64" (Korvettenkapitän Schütze), who had to repair his starboard side engine, which had failed due to a fuel pipe rupture, during the 1½ hour march at 3:15 p.m. stood between 7:10 p.m. and 7:35 p.m. about 80 nm east of the coast to wait out darkness "The coast was crossed and a course set for Hull. The intention to advance into the Manchester area had to be abandoned due to the failure of the port side engine as a result of a leaking oil line. A larger searchlight complex was addressed as Hull. The airship observed barrages of incendiary shells reaching an altitude of 4500–5000 m. "L 64" threw the entire ammunition from an altitude of 5,600 m in two attempts between 10:20 p.m. and 11:00 p.m. into the searchlight complexes visible below it. According to the British, the bombs fell on Skellingthorpe and Doddington; in these towns the warning signal from Lincoln had not been heard. Some bombs fell on Waddington and Mere. During the march back, the starboard aft engine failed at 12 a.m. and the port aft engine failed at 00.20 a.m. Despite the engine failures, the retreat was carried out without incident.

The ground defense had not been able to assert itself against the airships attacking at high altitudes; and the planes, of which only 20 got off the ground, had not had any success. The attack on the night of April 12th and 13th, 1918 had been particularly impressive; it had managed to drop bombs in the west of England and in the industrial areas of Birmingham. The danger still looming from German naval airships had become very evident that night. ²³⁰

6. Sea war from the German Bight until April 1918

Trade War of the Naval Forces

The direct participation of the surface forces in the fight against the merchant ship tonnage and against the naval forces of the enemy securing them was limited to rare occasions caused by the state of general readiness and the weather conditions as a result of the fragmentation of the High Seas Fleet to secure the routes through the edge area of the German Bight. There were few opportunities to take action against the vehicles, which were increasingly reported in the neutral channel between the German and English restricted areas. The accuracy with which British U-boats and surface forces barricaded the outer portions of the mine-free routes leading out of the German Bight made Fleet Command suspicious of any vessels reported in the neutral channel. After careful consideration, the Naval War Staff ordered, on the orders of the Highest, that all neutral merchant ships found outside the Baltic Sea and the restricted areas without an escort were to be captured if possible, with the exception of ships on coastal voyages and fishing vessels as well as ships located within neutral sovereign waters. The possibility of acts contrary to neutrality by fishing vessels still remained.

After the torpedo boat advances in late January and mid-February, in the dark period of March, under the command of the I. F d.T., Kommodore Heinrich, a large-scale operation with the cruisers "Emden" (I. F.d.T.) "Frankfurt", "Graudenz" (II. F.d.T.) and " Bremse" with VI. (Korvettenkapitän Tilleßen) and IX. Torpedo Boat Flotilla (Korvettenkapitän Ehrhardt) carried out. The purpose was attacking enemy light forces and waging trade warfare in the Skagerrak and Kattegat. The formations put out on March 10 at 3 o'clock in favorable weather - ESE 1 to 3, clear sky, light haze. The previous airship reconnaissance had had no result due to poor visibility. Also in the following days, long-distance reconnaissance by airships failed due to weather conditions. The association initially ran out on Blue Route without minesweeping protection. In 061 α top center, the 9th Torpedo Boat Half-Flotilla and the boats "G 11", "T 183", "T 184" took over the minesweeping protection with deployed equipment and guided the formation on a northerly course to the border of the restricted area, about height of Boybjerg. The courses were just clearing any barricades thrown west of Hornsriff. At 6 p.m. on March 10 the minesweeper boats were released and returned by the same route they had used to put out to sea. At 7 a.m. on March 11, the formation divided into four groups: "Emden" with the 17th Half-Flotilla, "Frankfurt" with the 12th Half -Flotilla, "Graudenz" with the 11th Half -Flotilla, "Bremse" with the 18th Half -Flotilla. Groups "Emden" and "Frankfurt" joined into the north entrance of the Kattegat to wage trade wars against traffic to and from Gothenburg and from the southern Kattegat to Skagen and Oslo.²³¹

Page 217 Light German naval forces in the Skagerrak

Group Graudenz controlled the traffic routes to and from Oslo and Larvik. Group Bremse had orders to wage trade war on the trade routes Skagen-Lindesnes and Skagen to St Abbs-Head and Blyth respectively. During the day there was little density, it varied between 1 and 3 nm, at times there was dense fog. The traffic encountered was light) as a result 1 large steamer, 5 small steamers, 1 small sailor, all neutral, were captured; 18 vehicles, including only one larger, were examined and released. The return was through the Little Belt. On March 13th at 2.45 p.m. the I. F.d.T. entered the port of Kiel with his armed forces.

At the beginning of April, the II Torpedo Boat Flotilla (Korvettenkapitän Heinecke) was to carry out a similar thrust into the trade war in the Skagerrak and Kattegat. The performance was postponed until April 13 due to fog. "Graudenz" (Korvettenkapitän Beesel) with the II. F.d.T. (Fregattenkapitän Madlung) led the bringing out of the II Torpedo Boat Flotilla At 9:35 a.m., four boats intended as escorts deployed the device and sat down in front of "Graudenz". Visibility was poor; despite the fog that set in soon after the advance, the advance on route 300 was continued. At 11:10 a.m. the device slipped out in 108 ß at the top left, two mines were torn off. After anchoring and the mine situation had been perfectly clarified by determining the designation of the mine-free route, the formation was able to weigh anchor again at 11:45 a.m. and continue the march. At 2:15 p.m., the II torpedo boat flotilla was dismissed, "Graudenz" began the return march with the four boats.

During the march of the II Torpedo Boat Flotilla through the English restricted area, some surface stands were sighted at first. The intention of disbanding the flotilla on the evening of the 13th and raking the Skagerrak in a wide reconnaissance line had to be abandoned at first because of increasing swell and a strong northerly swell, which forced the ship to go down with the speed. The breakup did not take place until April 14 at 1 a.m., about 60 nm north of Hanstholm. The result of the patrol through the Skagerrak was low, a few steamers and trawlers were examined and dismissed as not suspicious. On the march, a Swedish steamer was caught in the Kattegat, some were stopped, and smaller vessels were dismissed as unsuspecting. On April 15 at noon, the II Torpedo Boat Flotilla arrived in Kiel.

Reports received by the Fleet Commander during the early months of 1918 indicated that Norway-Shetland convoy traffic was no longer daily but once or twice a week, chiefly at the beginning and middle of the week. The number of steamers in the individual convoys had increased accordingly. The cover was recently provided by heavy armed forces, American ships of the line had been reported several times. However, the information given by the Admiralty about arrival and departure times was inaccurate and not correct: the convoys did not run on specific days of the week, but they did run at fairly regular intervals. ²³²

Page 218 6. Naval War from the German Bight to April 1918

An attack on a convoy covered by heavy naval forces promised impressive military success in addition to the loot in the cargo hold; under the circumstances to be expected, however, heavy forces had to be deployed with the entire fleet as cover. A push in a northerly direction was in line with the guidelines agreed with the Chief of the Admiralty, who wanted to use strong pushes to effectively relieve the pressure on the U-boats operating in the Channel and around England. Relief could thus be expected for the Channel area, which had become the focal point of English interest during the attack of our armies in the west.

Admiral Scheer designated Wednesday, April 24, as the day of the attack. The advance was based on a day's stay in the operational area west of Norway; the fuel reserves of most of the torpedo boat flotillas and some of the cruisers did not allow for a longer than three-day operation. For the first time, the announcement of the company's orders was restricted to a very small circle. The absolutely necessary preparations for reconnaissance and determining mine-free routes were ordered orally, and the use of radiotelegraphy was restricted to the utmost before and during the operation. These measures were a prerequisite for success; they led to the first success that the other side had no knowledge of the undertaking from the preparations to the climax.

All available forces, viz. I. Division, III. Squadron (without "Markgraf"), IV Squadron, I., II., IV. Reconnaissance Group (the latter without "Stralsund"), I. and II. F.d.T. on "Emden" and "Graudenz" with I., II., VI., VII. and IX. A torpedo boat flotilla with a total of 44 torpedo boats assembled in Schillig Reede on the evening of April 22, in order, as had been announced to all parts of the fleet, to carry out combat and evolution exercises in the Heligoland Bay the next day. Only here did the heads of the unions and leaders become aware of the intentions of the operation. The 5th Torpedo Boat Flotilla could not be taken due to insufficient travel distance. The commander of this flotilla, Korvettenkapitän von Tyszka, was given the command and protection of the escort service through the minefields south-west and west of Hornsriff. Effective protection of the intended outlet route was expected from the protective barriers 49 and 50 laid out on April 11 and 14. The sea area between these protective barriers and Hornsriff formed the starting point of the undertaking. The U-boats leaving the sea the day before the operation had been ordered to look for attack opportunities off the Firth of Forth for 24 hours and to report sighted forces and convoys.

At 6 a.m. on April 23, the Formations set sail: B.d.A. with the Attacking group in order: II. A.G., II. F.d.T. on "Graudenz", II. Torpedo Boat Flotilla, I A.G. The main body followed in the following order: IV. A.G., III. Squadron, fleet flagship, I F.d.T., I Squadron, IV. Squadron. With the main body ran the I., VI, VII and IX Torpedo Boat Flotilla. Immediately after leaving the Jade, dense fog set in. The road was mine-free up to List, from there it went about 80 nm through enemy minefields; minesweeper escorts and therefore a certain visibility were required through these. ²³³

Page 219 Advance of the High Seas Fleet to Norway.

At first it was possible to march at 14 nm; but when visibility decreased to 100 m at 11:30 a.m. when entering the minefield, it was necessary to anchor. Half an hour later it cleared up to 3 to 4 nm, the march was continued. The 9th Torpedo Boat Half-Flotilla, the 3rd, 5th and 6th Minesweeping Half-Flotilla and the 1st Escort Half-Flotilla sat in front of the formations. Surface stands were observed and shot down several times. For the rest, the ride through the minefields on route 300 was smooth; when it got dark, the border of the English restricted area was reached, the minesweeping units were dismissed.

The scheduled British guarding of the German Bight was carried out by four Uboats at the time the High Seas Fleet left port. "V 4" stood near Texel, "E 42" on the south-east side of the Dogger Bank, "V 4" north-east of the Dogger Bank and "J 6" west of Hornsriff. The changing visibility on April 23 meant that "J 6", through whose observation area the route of the High Seas Fleet led, did not sight destroyers and light cruisers - it was the head of the attack group - until around 9:00 p.m. The English commander mistakenly believed that they were British forces that were supposed to cover the forthcoming mine operation and whose presence in his area of operations had been previously reported to him. The observation of 5 battlecruisers with 5 destroyers and finally the passage of capital ships in a northerly direction did not cause the commander to do anything Report. He remained convinced that he was dealing with English naval forces. Thanks to the measures ordered by the Fleet Commander and the incorrect observation of "J 6", the units had left the German Bight unnoticed.

During the advance of the High Seas Fleet in the night it cleared up, the beginning of the day brought clear, very clear weather. Airship reconnaissance planned for April 23 had been initiated, but was canceled again because the easterly winds had picked up, especially in the higher air layers. Airship reconnaissance was also omitted for April 24 for the same reason. Airplanes were not taken.

At 5:20 a.m. on April 24, the B.d.A. with the attack group about 60 nm west of Egerö, 80 nm before the following main body; the advance continued as planned in a north-northwest direction.

At 6:10 a.m. a serious engine accident occurred on "Moltke". The inner starboard screw flew off, the turbine ran away, and before the quick action took effect, the wheel of the engine turning device had flown apart. Parts of the wheel smashed through the spout of the auxiliary condenser, several exhaust steam lines and that Deck to the main switchboard. The central engine and the main switchboard were full due to the auxiliary condenser, the side engines got a lot of water; all the engines failed due to salinization of the boilers. The ship made about 2000 t of water. Finally, a diver managed to close the seacocks and slide valves of the auxiliary condenser from the water outlet and inlet and to get the water under control. "Moltke" meanwhile sagged astern. The commander of the "Moltke" (Kapitän z. S. Gygas) first made a visual report to the officer in charge "Starboard engine unclear" and soon thereafter reported "that the center engine is also unclear, water is entering rooms, danger of steam and the reason has not yet been determined". 234

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After this report, Vice-Admiral von Hipper considered it impossible that the engines of the "Moltke" would be in order again, and dismissed the wrecked battle cruiser for the most part, assuming that the ship would still make a maximum of 17 nm with one engine. Since in the meantime "Von der Tann" (Kapitän z. S. Mommsen) had reported at 6:45 a.m. that the ship could only sail at a maximum speed of 21 nm due to abnormally high coal consumption, the B.d.A. decided to keep his distance from the main body to be reduced to about 60 nm.

At 8:02 a.m. the radio message from "Moltke" at 7:43 "severe damage, trip is 4 nm" was received by the Fleet Commander with an initially incorrect location information, which was corrected at 8:45 a.m. At 8:45 am "Moltke" again radioed the location with the addition "unable to move". At B. d. A., this report triggered the decision to accelerate with I. and II. A.G. as well as II Torpedo Boat Flotilla to the "Moltke", which had meanwhile come into sight. The first F.T. report from the "Moltke" (7:45 a.m.) had not been completely picked up by the B.d.A., otherwise he would have broken off the advance northwards at 8 a.m. to go to "Moltke. At around 9 a.m., when "Moltke" was reported to be unable to move, the Fleet Commander increased the speed of the Main Body to 15 sm. "Straßburg" with two torpedo boats was sent to "Moltke", the I. F.d.T. on "Emden" advanced towards "Moltke" at increased speed. The battleship "Oldenburg" (Kapitän zur See Löhlein) was instructed to get ready to tow "Moltke". Due to the necessary restraint in radio communications, the fleet commander knew about the further behavior of the B. d. A. nothing at first; he saw it as the task of the majority to take over the cover of the wrecked battlecruiser and assumed that the B. d. A. is still on the rise. Observing the radio service from the Neumünster news center revealed no irregularities in enemy radio traffic.

When the I. F.d.T. reported sighting of "Moltke" at 10:20 a.m., "Oldenburg" received the order to tow "Moltke" in via the outlet route of the previous day; "Straßburg" and two torpedo boats were made available to cover the tow train. For the way back and towing, there was a choice between the route through the Kattegat and the direct route into the German Bight. The distance from "Moltke" to Skagen was 225 nm, the way into the German Bight to the protection of its own barriers was only 180 nm. The belt passage for the damaged ship would have been difficult, to protect the tow all High Seas Forces would have passed through the Little Belt Admiral Scheer also considered the march through the Kattegat and Little Belt with strong naval forces to be inexpedient because this route formed the reserve route for our U-boats and the enemy should not be given any reason to operate in this sea area. It was also less likely to catch enemy forces on the way back through the Kattegat than on the direct route to the German Bight. Admiral Scheer therefore decided to use the High Seas Fleet and a tow train for the direct route to the German Bight.

Page 221 Measures of the "Great Fleet"

It was unrelated to this that on April 23, 1918 and the following days, the British Naval Operations Staff had special reason to observe the behavior of the High Seas Fleet carefully, because the blocking attempt was made in Zeebrugge on the night of April 22-23 and Ostend takes place. In the morning hours of April 24, the British Admiralty began to prick up their ears, without clearly recognizing in which direction German operations were to be expected. Harwich's forces were put on increased alert, in order to be prepared in any case against an attack directed in the direction of the south-east coast. However, the irregularities observed in the German Bight were too minor to record the convoy that left the Firth of Forth on the morning of the 24th. Only the radio messages sent during the "Moltke" accident left no doubt about the presence of German naval forces west of the Norwegian coast. One correctly concluded that the operation was of a larger scale. Shortly before noon on April 24, the Grand Fleet received the order to put to sea and to gather east of the Longforties. Almost simultaneously with this order the convoy coming from Norway arrived at Methil.

The main concern of the English Naval War Staff was the possibility of a High Seas Fleet strike against English naval forces in the northern North Sea, which were stationed separately from the Main Body of the Grand Fleet. The Grand Fleet had been stationed at Rosyth since April 12, 1918, and was there on April 24. The II Cruiser Squadron, whose base was Scapa Flow, was at the time in the Orkney Islands, the battleship Agincourt at Scapa, the battleships St Vincent and Hercules at Invergordon II Battlecruiser Squadron. As a result of the late determination of the being at sea of the German High Seas Fleet, however, all measures of the Great Fleet, in particular an order to the II Cruiser Squadron as well as "Herkules" and "Agincourt", to go to sea to reinforce the cover of the convoy to the II Battlecruiser Squadron, which left on April 24th, a push into the void.

"Moltke", which had sighted "Straßburg" at 9:50 a.m. and a little later "Emden", allowed "Straßburg" to tow her first. The towing connection was established at 10:38 a.m., but the towing line broke while being towed, just before at 10:40 a.m. the Main Body and the I. A. G. came into view. At 11:50 a.m., "Oldenburg" had taken "Moltke" in tow in an excellent seaman's maneuver and, accompanied by the main body, began the return march southwards at a speed of 10 nm. At the same time, "Moltke" was able to report to the Fleet Commander that the rudder was in order, that the port side engine and starboard outer engine would probably be ready for operation in four hours.

After the "Moltke" was picked up by the Main Body, Admiral Scheer gave Vizeadmiral von Hipper the order to advance again as part of the task at 12:30 p.m. decided to reduce speed to 15 nm on "Von der Tann" because of continued high coal consumption. Despite the reduced marching speed, the area of the convoy routes up to almost 60° north latitude was again cut through and reconnoitered from south to north and vice versa. ²³⁶

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At about 2 p.m. the Admiralty of the Navy reported via Neumünster that 30 ships were assembled in Flekkerö, which were to set off in a convoy for England during the night of April 23-24. Soon after this news was amended to say that this convoy was to depart on April 24th. Since there was at least the possibility of catching the convoy given the good visibility, the II. A.G. At 3:10 p.m. the B. d. A. on a general course SSE with first 15 nm, later 18 nm the march back. At around 5:30 p.m., the II. A.G. was in sight again and formed rear cover when it got dark.

In reality, a convoy of 34 ships, covered by the auxiliary cruiser (armed boarding steamer) "Duke of Cornwall" and the two destroyers "Lark" and "Llewellyn" as well as the II Battlecruiser Squadron with the VII Light Cruiser Squadron to the south of the convoy, leaving Norway on April 22 at 2:15 p.m. At dawn on April 23, the convoy was 140 nm east of the Orkney Islands and arrived at Methil (Firth of Forth) at noon on April 24.

The Main Body with the tow had meanwhile marched on at a speed of 10 to 11 nm. It was only able to reach the mine belt west of Hornsriff the following day when it was getting light, not at night as planned. At 5:30 p.m. the "U 19" (Kapitänleutnant Spieß, Johannes) on the return march to the Skagerrak sighted the II. AG and the boats of the II. Torpedo Boat Flotilla (5 cruisers and 6 boats). The vehicles could not be clearly identified by the submarine due to refraction and the great distance, they were mistaken for 11 older English armored cruisers and reported as such by radiotelegraphy. These at the fleet chief and B. d. A. Incoming report was correctly recognized as a false report and attributed to a mix-up with our own armed forces.

At 8:50 p.m. on April 24, the tow rope of the "Oldenburg" broke, and there was a delay of one hour. At 11 p.m. the B. d. A. was 30 nm behind the main body nothing to see.

All preparations had been made to make it easier for the Fleet to head for the barrier gap and to escort the formations safely into the German Bight on the searched route. The aircraft mother ship "Santa Elena" stood aft in the barrier gap in order to conduct early reconnaissance of the approaching fleet on April 25; barrier breaching groups and the VI. Mine Sweeping Division with two mother ships were at sea to be used if necessary; At 4:00 a.m., the half-flotilla assigned to minesweepers, led by the commander of the V. Torpedo Boat Flotilla, took up a waiting position outside the mine belt and to the east of protective barrier 49, not far from barrier 39. During the deployment of these light German forces, an English mine formation, Consisting of "Abdiel" with five destroyers, the lightship entered the German Bight from Doggerbank South and on April 25 at 3 a.m. threw the barrier 54, consisting of 272 mines, south of the center line of the Fleet path.²³⁷

Page 223 Difficult return march of the High Seas Fleet

The formations had already received the order on the evening of April 23, the operation was not causally connected with the fleet advance. The enemy coming from the west and returning there had not sighted any German vessels.

On the morning of April 25, the 10th Torpedo Boat Half-Flotilla pushed forward in a reconnaissance line to pick up the fleet. At 5:15 a.m. they sighted the IV. A.G. The half-flotillas sat down in front of the individual formations, which marched through the mine area in the order: IV. A.G., III. Squadron, Fleet Flagship, "Emden", I. Squadron, tow train and then the armed forces of the B. d.A.

The English submarine "J 6", which was still on its routine position in the north, sighted cruisers and destroyers on a southerly course at around 5 a.m. on April 25. The submarine dived and 1½ hours later saw numerous forces, which the commander took for battlecruisers and light forces. He watched the German ships passing south of his location until 8:15 a.m., then he reported back. Apparently he had sighted the B.d.A. group standing at the end. At noon on April 19, "Oldenburg" and "Karlsruhe" thought they had sighted a submerged enemy submarine; it was an error, probably caused by a broken barrel stump.

When passing square 076β in the vicinity of barrier 64, which had been thrown a few hours earlier, ships of the III. and IV. Squadron as well as torpedo boats surface stands, which were often - also on the fleet flagship - mistaken for floating mines, sighted and partly shot down. From III. Squadron (Vizeadmiral Kraft), the 5th Minesweeping Half-Flotilla in front was made aware of the presence of a dense barrier of numerous surface stands. A report from IV Squadron (Vizeadmiral Souchon) to the fleet commander that an apparently new lead cap mine barrier had been passed at 076 β 150 m on starboard apparently did not arrive on the "Baden". The securing torpedo boats had also drawn attention to the mines several times. When the 3rd Minesweeper Half-Flotilla (Kapitänleutnant von der Marwitz) driving in front of the "Oldenburg"/"Moltke" tow with equipment passed around noon on April 25 shortly after the U-boat alarm from "Oldenburg" 076 B, the guide boat issued a Lead cap mine sighted, which, like similar mines before, was regarded as a floating mine. Immediately afterwards, "M 67" and "M 59" sighted similar mines at some distance to starboard. "M 67" (Minensteuermann Neugebauer) then got one that was just under water Mine in sight just ahead of the boat. The evasive maneuver was unsuccessful, "M 67" hit the leading edge of the machine on the starboard side against the mine. The detonation blew the forecastle off the stern, both parts were only hanging together in a few rags. The stern buckled and immediately filled with water Boat listed heavily to port, it was not possible to bring the dinghy into the water. It was immediately apparent that the boat could not be held. "M 67" stood up and down after about 10 minutes and then quickly sank stern first. To rescue the crew, "M 59" (Lieutenant z. S. Marsch) was sent alongside, who executed the maneuver dashingly and skilfully, avoiding a shallow mine stand.²³⁸

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The crew of "M 67" was rescued except for those killed in the mine detonation - 5 people from the engine watch and 2 men who had been standing on deck near the breakthrough point. The formations that arrived in front of the 3rd Minesweeping Half-Flotilla just left the barrier on starboard and were freed from the mines. "M 67" was doomed to follow in the wake of the formations marching in front with a not inconsiderable current. After "M 67" ran aground, the tow platoon moved behind the I.A.G., which bypassed the barrier of the 1st Convoy Half-Flotilla to the north.

At 5:40 p.m. the machinery of "Moltke" was operational enough to ensure a speed of 12 to 13 nm. The towing connection was released near List and "Moltke" led with "G 89" and "G 92". U-boat security continued the march with its own engine power. About an hour after the launch, "Moltke" was attacked at 7:37 p.m. 40 nm north of Helgoland by the English submarine "E 42", after shortly before 7 p.m. "Graudenz" had observed a torpedo as a surface circler a little further south. "E 42" had been deployed by the Admiralty from its observation position in the west to attack the retreating High Seas Fleet. The skilful advance of "E 42" into the inner German Bight showed that the enemy had precise knowledge of the mine-free routes used. The torpedo hit "Moltke" at the level of the port side engine, the total amount of water that got in was 1761 tons; the ship initially remained maneuverable and fired with the central artillery in the direction of the suspected firing point. The speed of the ship was reduced to 3½ to 4 nm, the situation in view of the nearby U-boat was not without concern. "G 92" (Kapitänleutnant von Killinger, Arthur) was standing in the submarine protection 500 m from 4 points port ahead and covered the firing point with two depth charges; "G 92" and "G 89" (Oberleutnant z. S. Christ) together enveloped "Moltke" in a wall of fog and smoke. "Moltke" reached the Jade under its own power without any further incidents. During the night all the armed forces were assembled on the Jade.

The desired success was denied to the generously laid out operation, which was carried out with further operational objectives. The advance between April 23 and 25, 1918 was the most far-reaching that the High Seas Fleet had undertaken so far. As a result of the impossibility of constant, complete and faultless long-distance reconnaissance and the failure of the intelligence service, which had not succeeded in ascertaining the entire rhythm of the convoy traffic between Norway and England, the documents on which Admiral Scheer had to build his undertaking, which was limited in the long term, were insufficient. Despite the presence of the Grand Fleet in Rosyth, which was favorable for cutting off the High Seas Fleet, enemy countermeasures were not effective because Admiral Scheer had for the first time succeeded in avoiding everything that could benefit the British intelligence service. To what extent a correct report by the English submarine commander of "J 6", on whose eyes the course of the next few days and possibly fateful events of the naval war depended on the evening of April 23, would have brought about a change in the situation must remain undecided.²³⁹

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Admiral Beatty's definite intention to avoid a battle decision and the primary concern for the individual formations and armed forces in the northern North Sea made it improbable that a fleet battle would have broken out even if the High Seas Fleet setting sail had reported in good time. Had Admiral Scheer carried out the naval operation a day earlier or a day later, the attack on a convoy would probably have been successful. The statement of the English Naval History (1) must be agreed that in this case the news of the destruction of a convoy and the overpowering of the covering forces would have been the first warning regarding the presence of the high seas fleet under the Norwegian coast.

1) Newbolt V, p. 288.²⁴⁰

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7. Flanders

(From early February 1918 to late May 1918)

Advances of the security forces

In vain had been tried from land, from the air and from the sea to eliminate the Flemish ports as advanced starting points of the German submarine warfare. The Flanders offensive in the autumn of 1917 had not achieved the goal of getting Zeebrugge and Ostend into English hands; Air raids and shelling of the bases from sea and land had not been able to reduce the value of Zeebrugge and Ostend. There was no prospect for the enemy of checkmating the starting points of the submarine war in Flanders in the manner previously attempted (1).

Efforts were all the greater to block the way out for the departing naval forces—submarines and minesweepers, torpedo boats and destroyers. The new commander of the Dover Patrol, Admiral Roger Keyes, was anxious to carry out his plans for closing the Dover-Calais Strait by any means necessary. The thrust against the channel guard (2) undertaken by the II Torpedo Boat Flotilla during the night of February 14/15 had initially brought perceptible relief to the U-boats.

¹⁾ See p. 145.

²⁾ See p. 189 ff. 241

7. Flanders to May 1918

One the following night — 15/16 February — conducted by boats of the destroyer flotilla Flanders and III. The torpedo boat flotilla no longer detected the illumination of the Dover-Calais narrows. The F.d.T. Flanders, Fregattenkapitän von Stosch, left Zeebrugge on February 15, 1918 at around 8 p.m. with 8 torpedo boats. The boats were divided into two groups: "V 47" (leader's boat), with the F.d.T. on board, "V 69", "V 74", "V 82" under Korvettenkapitän Albrecht formed the southern group, "S 55" (leader's boat), "S 61", "V 68" and "S 95" under Kapitänleutnant Claussen the northern group. The southern group pushed west just below the French coast. At 1.30 a.m. they turned around near Calais and the return march was carried out without any particular incident.

The northern group marched to the off of Dover between 1:05 and 1:10 on February 16 and found that apart from the East and South Goodwin lightships, no navaids were burning, no lights could be seen on the coast and the coast was completely blocked out. Two guard vessels were sighted and came under fire, and it was believed that one of the vessels was being destroyed. The torpedo boats were fired from shore with flares and shrapnel, which was returned for about 5 minutes. A magnesium light buoy flared up far on the horizon. Nothing special happened on the march back.

The weather that night had been clear and clear in the evening, towards midnight the wind had freshened to SE 4 to 5; below the coast it was hazy at times. The observations of all concerned agreed that the Folkestone-Gris Nez light barrier was not in place that night. Apart from the guard vehicles fired upon, no guards were found. How far the discrepancy between the German statements and an unofficial English account (1) undiminished guarding and lighting of the section Folkestone - Gris Nez in the night from February 15th to 16th to the temporary lack of visibility under the coast and the not inconsiderable distance of the line Dover-Calais to the Folkestone-Gris Nez line remains an open question.

The F.d.U. Flanders, Lieutenant Commander Bartenbach, reported in his war diary of March 5, 1918 (2) on the observations made during the night of February 15-16. Summarizing the month of February, he emphasized again that "the February attack by our torpedo boats on the Dover Straits guarding forces forming a light barrier made it visibly easier for the U-boats to pass through the Channel Strait. In any case, the enemy had to switch to a different method which presented fewer difficulties for the passage. The light barrier is no longer continuous, instead magnesium fires are alternately burned from time to time in different places. A repetition of the advance of our torpedo boat flotilla in the next few months seems promising".

¹⁾ Sir Roger Keyes: "Navy Memoirs II" p. 178.

²⁾ See p. 195.²⁴²

Flanders torpedo boats at Dover Straits

However, the improvement in the situation of the Dover Strait did not last long. In a review of the period from March 20th to April 3rd, Korvettenkapitän Bartenbach stated that the "night lighting by searchlights and magnesium fire, which was initially discontinued after the torpedo boat advance, is fully operational again; nevertheless, the passage succeeds, albeit with greater effort".

By April the relief brought about by the torpedo boat advance had been completely eliminated. Searchlights and magnesium fires were back in action as they had been before, only rarely permitting a surface break. The passage had to be made under water, but according to Korvettenkapitän Bartenbach, it did not present any insurmountable difficulties. In April the barrier was passed sixteen times by U-boats that had already made their way back and forth. With the exception of four trips over water, all breakthroughs were carried out underwater at periscope depth when entering the light zone. The F.d.U. Flanders was attributed to the constantly calm, very cloudy or hazy weather and the resulting use of all anti-submarine warfare.

For this reason alone, the passage through the canal was suspended at the beginning of May until more favorable weather conditions emerged for the Flanders submarines. In March and April 1918, the Flanders torpedo boat forces did not repeat the breaching of the Dover Channel barrier. The field of tasks to be mastered daily by the Flanders forces, which were weak compared to the Dover Patrol and which lay directly off the Flanders coast in keeping the approach routes for the U-boats open at all times, had priority. Despite the ongoing addition of the English mine and net barricades stretching between Smal Bank — Buiten Ratel to the Scheidemündung, which were laid out at a distance of 10 to 20 nm along the coast, it was possible to keep exit and entry routes for Ostend and Zeebrugge open keep. If the minesweeping work in the German Bight, which was carried out in the open sea area of the middle North Sea about 150 meters from the bases, had to be secured against attacks by strong surface forces by ships and units of the High Seas Fleet, the conditions off the Flanders coast were much more favorable. In Flanders the barriers were in the immediate vicinity, sometimes even within range of the strong coastal fortifications. If the British were to withdraw further from the coastal barricades, it would have made it much more difficult for the minesweepers to retreat quickly and without further ado to the protection of the coastal fortifications before the barricades were being guarded. The enemy had to rightly strive to block the sea area immediately off the coast, which was difficult to pass due to sand and shallows, for the German U-boats, because leaving this sea area free would have enabled the Uboats to penetrate between the sands and the channel entrance or to reach the open sea. A seaward widening of the mine belt, similar to the procedure in the outskirts of the German Bight, would have made minesweeping work on the barriers in the inner sands area much easier for the German side, because the minesweepers would then be separated from the barrier guards by the widened mine belt and against them would have been protected.²⁴³

7. Flanders to May 1918

At the same time, the enemy had to be careful not to block the canal exit itself and the approaches to the sheath as well as the bombardment of the German bases from the sea by some blocking measures. As things were in Flanders, an effective barrier would only have been in place if the mine and net barriers, as given by the navigational situation and actually implemented, had been effectively guarded day and night. This, however, was not attempted either in the earlier period of the war or now. The guard consisting of monitors, destroyers and small vehicles, which arrived at the barrier with great regularity towards morning, removed with equal regularity before dusk, so that in the early morning hours, at dusk and at night there was sufficient time to find the necessary routes to create and control. In the opinion of the enemy, it may not have been possible for the security guard to remain at sea during the night due to the high risk of small warfare equipment. Guarding in the immediate vicinity of the mines and nets would only have been possible at the expense of casualties, because the proximity of the German bases also made it possible for all small warfare equipment to arrive made possible in the short span of the night hours. The cautious behavior of the enemy, on which the German U-boat successes achieved during the first years of the war, in particular Otto Weddigen's act on September 22, 1914, may still have had an effect, relieved the Commanding Admiral of the Marine Corps of many difficulties.

Mine sweeping and clearance work was frequently interrupted by bad weather during the winter months. At 12:40 p.m. on February 7, torpedo boat "A 10" of the Flanders Minesweeper Half-Flotilla ran aground on a mine 2 nm north-west of the port entrance of Ostend and sank. The mine hit tore off the forecastle up to boiler room I, the people on deck saved themselves on the stern, which was still floating for some time, and jumped into the water from here with life jackets. "A 9", which followed at a distance of about 150 m and attempted rescue with all means, succeeded in rescuing 7 men with an increasing SSW wind, force 4 to 5, and the corresponding sea state. The commander, Helmsman Dode, and 17 men were saved In the night from February 5th to 6th engine noises were heard near Ostend) "UC 79" (Oberleutnant z. S. Löwe) was attacked abeam Nieuport Mole by an enemy motorboat, the motorboat with artillery after the next been shot at from a distance. The mines to which "A 10" fell victim were probably thrown by motor boats in the night of February 6. Mine clearance work at the accident site of "A 10" found and cleared several anchored mines.

The activity of the perimeter guard, which fairly regularly prevented minesweeping in the daytime, was generally not very lively. Occasional shelling of the coast from sea and land, which triggered corresponding counteractions, had no adverse effect. ²⁴⁴

Shelling of the Flanders coast

On February 17, from 12:33 p.m., a monitor of the security guard fired about 10 rounds at Ostend under heavy smoke protection. At the same time, several planes appear over the city; the batteries of Tirpitz, Prussia and Germany return fire. When German artillery planes approach, the enemy stops firing and turns away. The bombardment is unsuccessful, the impacts are briefly in the water.

Around noon on February 27, there was brief combat contact between the 1st Torpedo Boat Half-Flotilla Flanders, which had set out to clear mines, and the enemy's perimeter guard; this forces the 1st Torpedo Boat Half-Flotilla to pick up the device and run back to Zeebrugge.

On March 18, at 7 p.m., Mariakerke was shot at from land. The Beseler, Oldenburg, Antwerp and Tirpitz batteries returned fire.

On March 22, the Tirpitz and Pommern batteries were fired on from land with medium caliber without causing any military damage.

On March 23rd, Battery Pommern fired on troop movements in Dunkirk which had been recognized by balloon observations and then received ineffective enemy return fire.

On March 24th and 26th Ostend was fired upon from land without any effect.

On the morning of March 27, 5 enemy aircraft unsuccessfully attacked the boats of the 2nd Destroyer Half-Flotilla, which were at sea to secure the minesweepers, with bombs and machine guns. On April 1 and 2, boats of the 1st Destroyer Half-Flotilla are also attacked by aircraft with bombs and machine guns without success.

Ostend is shelled from land during the night of April 2: two bursts in the shipyard, no damage. On April 7, Ostend and the Tirpitz battery are shelled from land; the enemy batteries are spotted and taken under fire.

On the evening of April 11th, an extraordinarily active hostile flight operation begins off the entire coast. About 8 large planes attack Zeebrugge, but are pushed back by barrage, so they drop their bombs in the water and in the area south of the port. An enemy plane is shot down by anti-aircraft fire and has to make an emergency landing in Holland. — Shortly after midnight, various sounds of motor boats at sea are heard.

On April 12th at 1:15 a.m. a shelling of Ostend by 4 monitors begins. About 100 impacts lie on both sides of the city, but no significant damage is done. Batteries Beseler. Tirpitz, Prussia. Hindenburg and Deutschland return fire with the help of the sonic crew and visible enemy muzzle flash. The opponent fogs up. Enemy planes throw off numerous flares of great luminosity, which burn for about 10 minutes, stand pretty much in place and brightly illuminate the coast and sea area. Enemy motor boats approach Ostend and machine-gun the harbor entrance; they are pushed aside by the coastal artillery. An enemy motor torpedo boat firing at the searchlight on the mole is set on fire by Batterie Eylau (two 8.8 cm SK L/35); the occupants of the boat jump overboard and drown.

The boat itself drifts onto the beach with full equipment and is salvaged by the German side. Maps dated April 9, 1918 are found on the motorboat, which show that the enemy intended a barrage attack with block ships against the port entrance of Ostend. The charts show the courses entered in ink for approaching the blockships as well as the courses for the smoke and security vehicles. The grouping of the projectile impacts around the batteries suggests the intention first to silence the eastern sector and then, under the cover of artificial fog, which is supposed to be created by numerous small vessels close to the coast, to advance against the entrance with barrage ships. ²⁴⁵

7. Flanders to May 1918

According to the Marine Corps, the rapid and sustained onset of well-distributed artillery fire from the coast and the extensive use of flares caused the enemy to abandon their plan (1).

On April 14, from 2:00 a.m. to 2:40 a.m., Ostend was shelled from land with around 68 rounds of 24 cm caliber. The impacts are in the area of the batteries east and west of the city. The enemy batteries are taken under return fire. Battery Pommern fired 6 shots at Dunkirk. No casualties were sustained in Ostend and the surrounding area, and no damage was done.

At about 2 p.m. on April 17, Battery Tirpitz fired a few shots at enemy destroyers at a distance of about 150 km, which, it was determined, had laid out a buoy to indicate the firing position. On the following night, April 18, at 1 o'clock, enemy monitors opened up gunfire on the batteries lying to the west of Ostend. Muzzle flash is observed in four places. On the fire of the batteries Tirpitz, Deutschland. The enemy stopped firing at Prussia and Beseler after 19 minutes. 50 salvos are observed, damage and casualties do not occur.

A few days later, on April 20, between 6 p.m. and 7 p.m., Ostend was shelled from land. All salvos, nine are observed, are in the water. The firing batteries and Dunkirk were taken under return fire. Battery Tirpitz fires a few shots at a monitor running west. On April 22nd, Battery Tirpitz was able to open fire on a foggy monitor of the security guard.

The numerous air raids on the Flemish bases occasionally had a somewhat greater effect. After an unsuccessful air raid on February 16 between 9:10 p.m. and 10:40 p.m. on the Bruges shipyard and artillery depot, enemy air raids on Bruges, Zeebrugge and Ostend intensified the next evening and night. During the night of February 17th and 18th, about 15 large English aircraft were observed, most of which were pushed away from the Bruges shipyard by barrage and target fire, so that most of the about 70 bombs missed their target. A dud fell into the shipyard's new magazine under construction. "A 40", which was in the north port, was severely damaged by a direct hit in the turbine rooms, while the nearby "A 29" suffered a leak in the boiler room. The Rombacher Hut was hit by several bombs and quite considerable damage was done. However, operations could be maintained. There were no personnel losses that night. In the afternoon of that day, enemy air squadrons had advanced as far as the Bruges area, but had not caused any damage by dropping bombs on Nieumünster airfield. The endangerment of the U-boats lying in the harbor was reduced on February 19th by the completion of the first two shelters for U-boats at the northern torpedo boat harbor. Furthermore, a shelter for the workshop personnel of the submarine flotilla and for port construction was completed on the north port area. Two more submarine shelters and the berth for the 500-ton floating dock were completed on March 21. On the night of February 25-26, between 11:30 p.m. and 1:30 a.m., heavy air raids on the Bruges shipyard were renewed.

1) The actual facts are described on page 237 ff. ²⁴

Page 231 Air raids on Flanders bases

About eight large English aircraft attacked persistently three or four times, with the majority of the aircraft attempting to glide over the yard. Of about 40 bombs, none fell on the area of the shipyard; a washer and a dredger barge sank in the north harbor, otherwise no significant damage. Due to the sunken vehicles, the entrance to the northern torpedo boat harbor was temporarily narrowed. On February 28, three bombs dropped over Nieumünster, Batterie Zeppelin, caused no damage.

On March 3, in fog and low-lying clouds, enemy aircraft repeatedly attacked Seaplane Station II (Ostend) and shore batteries with bombs and machine guns. About 20 light bombs were dropped on Seaplane Station II, destroying four aircraft, one badly damaged, as well as two hangars. There were no staff losses. On the retreat, an enemy plane was shot down by flak and crashed into the sea, burning.

On March 12, from 2 a.m. to 3 a.m., seven large enemy aircraft attacked the Bruges shipyard with a total of 40 bombs. Pushed back by barrage and caught by searchlights, all the planes dropped their bombs far outside Bruges, they did no damage. All day long on March 21 there was very active enemy air activity along the coast. The Commander-in-Chief of the Dover Patrol responded to the shelling of Dunkirk (1), La Panne and Bray-Dunes by torpedo boat flotillas by sea and air attacks in the early hours of that day. At around 4:10 p.m., 26 enemy planes appeared over Ostend, and at the same time two fogged-up monitors opened fire on the city. Batteries Tirpitz, Prussia and Deutschland immediately returned fire, fighter planes drove away the enemy spotter planes, but our own artillery planes could not intervene because of strong counteraction. During the 26-minute bombardment, a total of 42 shots of the heaviest caliber were counted, 20 of which fell into the city, 2 near the shipyard, and the rest into the water. Significant house damage in the city, the shipyard remained undamaged. Two hits in the naval lock punctured the gate. German losses were 1 dead, 9 seriously injured and 12 slightly wounded. 14 dead and 32 wounded were reported by Belgians. Between 9:45 p.m. and 11:30 p.m., ten large English aircraft, mostly in groups of different sizes, descending in gliding flight, attacked the Bruges shipyard with about 60 bombs. All surcharges were outside the shipyard area. The steamer "Niobe", the motorboat division's liveaboard, was damaged in the north harbor and the forecastle hit the embankment.

Enemy air activity was very active on March 23rd. Bruges shipyard, Zeebrugge Mole and Blankenberghe harbor were bombed between 3 p.m. and 5 p.m. At the Bruges shipyard, 12 workers were killed and 25 wounded. "S 63" and "V 70" were slightly damaged by splinters. From 11:30 p.m. to 12:45 a.m. there were heavy air raids on the Bruges shipyard by ten large English aircraft.

1) See below p.	. 234 ff. ²⁴⁷
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7. Flanders to May 1918

The searchlights could not penetrate the ground fog, the attacks were consequently difficult to recognize, since all the planes attacked in gliding with the engine switched off. Most of the bombs fell outside the shipyard area. "UB 30" was damaged by a bomb penetrating the canopy on the superstructure of the stern without delaying the completion of the submarine being repaired.

On March 24th and 26th bombs were dropped at the Bruges shipyard and south of Blankenberghe and at Battery Hertha, without causing any serious damage. From 11:00 p.m. to 12:20 a.m., eight large English aircraft attacked the Bruges shipyard with a total of 40 bombs, eight of which reached the shipyard site. A shipbuilding hall was severely damaged, the other property damage was insignificant; Losses did not occur.

In the afternoon and evening of March 26, enemy aircraft attacked military installations along the coast, Mariakerke, Ostend and Blankenberghe. Three aircraft were damaged at Seaplane Station II.

On April 1, from 2:40 a.m. to 4:40 a.m., there were heavy attacks on the Bruges shipyard by 14 large English aircraft; about 80 bombs were dropped. The boat "V 74" lying at the Blücherbrücke was moderately damaged by a direct hit on the middle gun, steamer "M 3" in the north harbor on the stern, otherwise only damage to houses in the city.

Air raids at noon on April 3 between Ostend and Wenduyne were unsuccessful. After the air raids on Zeebrugge carried out on the night of April 11th and 12th in connection with the unsuccessful blocking raid on Ostend, smaller bombing raids on Zeebrugge, Breedene and Ostend took place on April 12th and 19th without causing any damage.

Other events in the naval air war from early February to late April 1918:

- 15 February: At 10.45 a.m. east of Nordhinder, 5 aircraft spot a convoy of 11 merchant steamers and some torpedo boats on an ESE course. 2 flying boats accompanying the convoy turn to the north-west as our planes approach. The southern one is caught up and after a short resistance by Oberleutnant d. R. d. M.A. Christiansen crashed on fire.
- February 18th: 4 coastal planes drop 18 bombs on the seaport and the barracks near Calais to the south-east. Headlights are machine gun attacked.
- 19 February: 1 remote control aircraft from Seaplane Station II (Ostende) is attacked by 5 enemy Spads at around 3 p.m. and shot down in flames between Ostend and Breedene from a height of 100 m. The occupants, Vizeflugmeister Kruse and Flieger Plaukert, are wounded and rescued.
- 27 February: At 9:50 a.m., aircraft from Seaplane Station I spot the England/Holland convoy between Nordhinder and the Maas lightship. It consists of 17 merchant steamers with a heavy cover of light cruisers and destroyers, which fire vigorously at our planes. On the same day, a squadron from Seaplane Station II under the command of Lieutenant d. R. d. M.A. Frantz attacked northeast of Sondettie by 4 Spads. Combined MG. fire brings down the "enemy" leader plane.²⁴⁸

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Page 233 Activity of the Naval Air Force Flanders

- At 3:45 p.m. west of the Maas lightship, 2 aircraft attack the Holland/England convoy with 10 bombs. The planes have to evade the well-placed anti-aircraft fire in the low clouds.
- March 12: At 10:00 a.m. an aircraft of the Coast Guard Squadron I is shot down by two enemy land combat single-seaters across the Haan and crashes into the sea in flames. The bodies of the two crewmen, Lieutenant d. R. d. M. 3rd Kampmann and Lieutenant d. R. d. M. A. Steinadler, are recovered.
- 15 March: Across Ostend, II Naval Field Fighter Squadron attacked two enemy zeroing planes. Flight master Nietsche causes one of the two planes to crash 5 nm abeam Nieuport Bad.
- March 16: During a long-distance flight over the eastern steamer route, two planes attack the sailor "Rinsina 2", which later shows the Dutch flag, with machine guns. After the crew has climbed into the boat, the planes bomb the sailor, which on March 18 drifting is again attacked by planes and sunk by planes on March 19th.
- March 17th: The 1st Destroyer Half-Flotilla, which was at sea to secure the minesweepers, took several enemy aircraft squadrons crossing in the nearer sea area under anti-aircraft fire, two aircraft covered the boats with bombs, so that; On "V 47" a dynamo fails due to vibration.
- March 24: Four seafront single seaters shot down one Sopwith from a squadron of five enemy aircraft at about 11 o'clock west of the Vandelaare lightship. A second enemy aircraft shot down by Battery Zeppelin at 3:40 p.m.
- March 30: On the return flight from long range reconnaissance, aircraft "1408" from Seaplane Station I north of West Hinder crashed.
- 1 April: at 2:25 p.m., six enemy land combatants attack a squadron of three aircraft at Naval Station I north of Thornton Bank. Aircraft "1681" (Obermatrose Behrendt, Leutnant d. R. d. M. J. Hauptvogel) and "2102" (lieutenant for S. Tornau, aircraft master Fricke) are shot down. The third plane, "2107" Megner, Giese) escapes after downing an enemy plane.
- April 7: Air raids on the minesweepers and their guards are repeated. "A 11" is slightly damaged by a bomb. The I Z half-flotilla fires at enemy aircraft with over 100 rounds.
- 21 April: A squadron from Seeflugstation I under the command of the Oberleutnant i.e. R. d. M.A. Christiansen stopped the Dutch schooner "Meeuw" on a reconnaissance flight north of Nordhinder at 9.30 a.m. with machine gun fire and set it on fire after the crew had disembarked. The abandoned and burning vessel was later covered with bombs.

The forces of the F. d. T. Flanders carried out offensive operations during March and April 1918, as far as the weather conditions and the status of the mine clearance work, which had to be primarily in the interest of submarine warfare, made such operations possible. On March 10th, to combat the convoy traffic between Holland and England and to supplement the mine barriers west of the Maas lightship (squares alpha 141, 142, 147 and 146) that were laid on December 22nd, 1917 (1) and have since become ineffective, one was thrown a 100-time-mine angle barrier with a 28-day timer within the restricted area. 249

1) See p. 132.		

7. Flanders to May 1918

The task was completed at 11:45 p.m. under the leadership of Korvettenkapitän Albrecht by the Flanders Destroyer Flotilla with the boats "V 47", "V 68", "V 69", "V 61", "V 82", "V 74", "S 63" carried out; "G 95", "A 58", "A 59" formed the protection.

In preparation for an operation against the coastal locations of Dunkirk, Vray-Dunes and La Panne, the Flanders torpedo boat flotilla conducted a reconnaissance trip under the enemy coast between La Panne and Bray-Dunes on the morning of March 19 under Kapitänleutnant Aßmann. The motorboats "L 7" and "L 2" of the Flemish Motorboat Division, under Lieutenant z. S. d. R. Ritthausen at the same time advanced up to 100 m to the French coast and took photographs between La Panne and Dunkirk without sighting anything of the enemy. The A -boats of the Flanders Torpedo Boat Flotilla sighted an enemy guard boat at 3:55 a.m., which turned away and alerted the coast. The shore batteries fired air grenades and for a short time barred the western deep without success. The return trip took place without further incident.

Simultaneously with the Flanders Offensive, which began on March 21, 1918, the Commanding Admiral of the Marine Corps had ordered a fire raid on the enemy's rear communications that could be reached from the sea and a shelling of Dunkirk and military installations east of them. It was expected that the night watch would be in Dunkirk or Dunkirk Roads. There was heavy enemy supply traffic from Dunkirk from the east and south, large pioneer parks had been identified at La Panne and Brav-Dunes and a reloading station at Adinkerke. F. d. T. Flanders, Fregattenkapitän von Stosch, on "V 47", the command boat of the Flanders destroyer flotilla. The bombardment forces were divided into three groups:

Group 1 consisted of the boats "A 59", "A 61", "A 49", "A 43" and "A 48" under Lieutenant Captain Aßmann,

Group 2 from the boats "A 27", "A 28" and "A 30" under Lieutenant Densch, as well as

Group 3 from the boats "V 47", "V 68", "V 82", "V 74", "V 81", "G 95" and "S 61" under Lieutenant Commander Albrecht.

The shelling of the coastal areas was to begin at about the same time as the start of land operations scheduled for 5 o'clock. At that time, the flat sands off Dunkirk were full of ebb currents at only half the tide. It also had to be accepted that only a small part of the return march could take place under cover of darkness. To support the navigation, which was particularly difficult under the circumstances, two squadrons of the Flanders minesweeper half -flotilla had to occupy the following approach points by 4 a.m.: western squadron "A 19" (Steuermann d. R. Möller), "A 7" (.-Ob.-Steuermann d. Seewehr Theil), leader Kapitänleutnant z. D. Boldemann, on the north-eastern beach of the Smal Bank; eastern squad under Lieutenant-Captain d. R. Schladebach with the boats "A 4" and "A 9" at the north-east tip of the Nieuport Bank.

Page 235 Shelling of Dunkirk by torpedo boats

The advance of all armed forces involved took place according to plan.

At 4:48 a.m. on March 21, Aßmann Group was in its firing position in front of Dunkirk and between 4:48 a.m. and 4:55 a.m. at an average distance of 55 hm they fired 448 rounds with the help of flares. The shore batteries also returned fire using numerous flares, but without success as the flares were all too short. The monitor "Terror" lying at anchor off La Panne with "M 25" and the French destroyer "Oriflamme" also takes part in the defense The ammunition used by the Aßmann group, in addition to hitting the harbor basin, 172 shells fell in the Dunkirk area of the fortress. Considerable damage was done to 35 streets and squares in the city, as well as to the quays and shipyard sheds, with numerous dead and wounded. When the first shots were fired, the English destroyers Botha and Morris, who were on standby, and the French destroyers "Bouuclier", "Obusier", "Magon", and "Capitalne Mehl" left the harbor. "Botha" had been at sea until midnight and had had to anchor in the roadstead because of the city's smokescreen for anti-aircraft defence. He immediately slipped the anchor and set sail on a NW course to cut off the German torpedo boats; the others soon followed. With the destroyers coaster "20" (CMB 20) ran out.

Group Densch also reached the ordered position in front of Bray-Dunes at 4:48 a.m. and opened fire when they clearly heard the firing of the first group. Bray-Dunes was clearly visible in the flare fire from the boats and was killed with 270 rounds at distances between 43 and 53 hm shot at with visible success. At 4:56 a.m. the fire ceased and the return march was carried out without incident.

Group Albrecht heard gunfire in front of Dunkirk at 04:48 and soon afterwards that of the Bray Dunes group. Immediately thereafter, heavy enemy barrage began on their own bombardment course. Between 05:05 and 05:13 Group Albrecht closed the military installations of La Panne and Adinkerke with 802 rounds. The fire lay well, two fires were observed. At 5:32 am, on the return march, Gruppe Aßmann passed the two western Markboote "A 19" and "A 7" on the same course. According to the location of the meeting of group Aßmann with "A 19" and "A 7" at 5:32 a.m., these boats were to the west of the ordered position, possibly instead of at the 5 m point of the Smal Bank at the 5 m point further to the west des Buiten Ratel. The two weakly armored boats were made aware of the dangerous situation by acclamation and instructed to retreat far to the north immediately, as hostile counteraction was expected under the coast. A few minutes later, at 5:38 a.m., vessels were sighted abeam on Group Aßmann starboard at high speed, which were soon identified as destroyers.²⁵¹

7. Flanders to May 1918

After exchanging identification signals and simultaneously opening fire on the front enemy destroyers with flares, they were identified as enemy and at 5:39 a.m. came under fire at a distance of about 12 km. The enemy immediately returned fire, but apparently overestimated the distance due to the small silhouette of the A-boats and overshot it. The fire from the A-boats of Group Aßmann did not remain without effect: about 10 minutes after opening fire, flotilla commander "Botha" was hit in a boiler room and could no longer maintain speed. "Botha" let go of Group Aßmann and turned against the "A 19" and "A 7" following the Aßmann group. When turning to port, "Botha" fired two more torpedoes at its previous opponents, without hitting the target and without the torpedoes being noticed. "Botha" managed to ram "A 19" amidships and cut it in two. Meanwhile The smoke screen developed by Gruppe Aßmann made it difficult for the enemy to get an overview of the situation. "Botha" then tried to ram "A 7", which was behind "A 19", missed the boat and showered it with fire from its rear guns. The enemy destroyers, meanwhile, lost touch through the use of smoke. The torpedo officer of the following French destroyer "Capitaine Mehl" took "Botha", whose distinguishing signs no longer burned due to its battle damage, for a German destroyer and fired at it with a torpedo. The torpedo hit the rear boiler room and finally put "Botha" out of action, but the destroyer was still able to be towed to Dunkirk. "Morris", which, after a vain attempt to ram "A 7", crashed into the smoke screen again on an easterly course The Aßmann group came into sight for a short time and fired a torpedo without success. The French destroyers now all attacked the "A 7" and caused it to sink with gunfire. A small part of the crew was picked up by the enemy.

Group Albrecht received the radio message at 5:43 a.m. that Group Aßmann was engaged in combat with destroyers. Korvettenkapitän Albrecht then headed for the gunfire and at 5:50 sighted Aßmann Group on the port side ahead. The destroyers of Group Albrecht passed Group Aßmann at about 200 m, turned behind them and went on the same course. The destroyer flotilla ended up in the artificial fog, which severely restricted the tightness in the low wind. Only faint, isolated flashes of muzzle flash were visible from the enemy; fire was returned by 5:56 a.m. From this point on, the enemy destroyers were no longer to be seen.

At 6 o'clock during the return march the English coaster "C.M.B 20", which had advanced at high speed through the nest deep towards the gunfire, near the Stroom Bank light buoy off Ostend to attack Group Aßmann. The motorboat was spotted in time and was followed by "A 43" and "A 48" came under fire. "C.M.B. 20" turned to starboard under fog and fired a stern torpedo that passed between "A 69" and "A 41".

When it was determined on the morning of March 21 that "A 19" and "A 7" were missing, the destroyer flotilla and torpedo boat flotilla left Flanders again, but found only rubble on Middelkerke Bank and were able to recover one survivor and 15 dead.²⁵²

Loss of "A 7" and "A 19"

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On the German side, losses had only occurred on the "A 7" and "A 19", namely: "A 7" 23 dead, 1 wounded, 1 prisoner; "A 19" 18 dead, 7 prisoners. The English had 13 killed and 8 wounded on "Botho", and 2 wounded on "Morris". The timing caused by the fighting on land prevented consideration of the water depths and current conditions, which depend on the tides. The navigational difficulties that arose as a result were obviously the reason for the situation in which the "A 19" and "A 7" found themselves. The operation was conducted with great skill and demonstrated the excellent attacking spirit of the torpedo boat forces involved.

On April 9, 1918, the Flanders destroyer flotilla with the boats "V 47", "S 61", "V 68", "G 95", "V 82", "V 81" under Korvettenkapitän Albrecht set out for renewed bombardment . Between 11:15 p.m. and 11:21 p.m., more than 700 rounds were fired at land installations in La Panne and Adinkerke at a distance of 50 to 60 hm. The coast could not be seen in the flare fire. There was no defense by enemy naval forces, and the flares and alarm rockets fired from land did not lead to any counteraction either. This operation was also carried out in connection with fighting on the land front of the 4th Army.

In the same night, Lieutenant Aßmann on "A 59" with "A 80", "A 58" and "A 61" advanced unsuccessfully into the sea area north of the Meuse lightship in order to seize a steamer reported there.

The English attempt to block Zeebrugge

The air and sea attack against Ostend and Zeebrugge on the night of April 11-12, in which an English motorboat with plans to block Ostend fell into German hands, was the forerunner of a large-scale, attempt, carried out for the first time in this form, to fatally hit German submarine warfare by finally eliminating the Flemish bases. When the same was cleared in 1914, the enemy did not destroy locks and other installations that were difficult to remove, so that the ports could be used later for their own use. Attempts to seize the Flemish ports by land offensives had failed; the hope of being able to use Ostend and Zeebrugge again during the war was finally dashed. After the poor results of all previous efforts, there was no longer any serious expectation that the bases would be paralyzed by air raids and shelling from sea or land.

As a result, old plans were now intensified to finally block Ostend and Zeebrugge by sinking ships in the entrances and locks or by direct attacks from the sea. The history of the war pointed out, however, that block attempts against a heavily guarded and fortified coast had never been successful, so the use of personnel and material corresponding to the size of the target had to be measured all the more. ²⁵³

7. Flanders to May 1918

As early as late 1915, the leader of the Dover Patrol, Admiral Bacon, had discussed with the Admiralty plans for the immediate destruction of the Zeebrugge locks and for the blocking of Ostend by two old merchant ships; certain preparations had been made.

However, the execution of the plan was postponed at that time because the production of artificial fog from small vehicles had not yet been reliably solved and because it was planned to land troops in Ostend and to take action against the bases from land. Only after the failure of the Flanders offensive in November 1917 and with Russia's departure as an ally (armistice of Brest Litowsk on December 14, 1917), the Allies' hopes of being able to attack in the West, which had collapsed for the time being, did they push for the most severe measures.

The examination of various possibilities led to a provisional conclusion at the beginning of December 1917. Rear Admiral Roger Keyes, who at the end of September 1917 had taken over the management of the planning department in the Admiralty's operations staff, presented on December 3, 1917 a plan worked out on the basis of various previous proposals, which referred to the simultaneous blocking of Ostend and Zeebrugge by several old cruisers under cover limited by artificial fog and darkness. Fog machines of sufficient power for motor boats were now available so that there were no longer any difficulties in this respect. A direct attack on the pier and locks by artillery fire, by landing destroyer squads or by torpedo attacks with coasters was not provided for in this original plan. The objection that the use of Zeebrugge and Ostend for their own naval warfare would be restricted by a successful blockade from the sea in the event of an advance that might take place sooner or later was countered with the consideration that the Germans would certainly thoroughly destroy the ports before evacuating them and would be shut off from the sea by concrete ships.

The initially very general plan was sent to the responsible commander, Admiral Bacon, for examination. Admiral Bacon's position differed from the Admiralty's plan in important respects. In an essential respect, namely the suggestion of a simultaneous direct attack against the mole and the lock gates, he relied on proposals which had previously been made elsewhere. Admiral Bacon thought of the implementation broadly as follows:

- 1. Shelling of the batteries at Knocke in order to simulate landing intentions there and to draw the enemy's attention in the wrong direction.
- 2. Fifteen minutes after the start of the bombardment, the monitor "Sir John Moore" (two 30.5 cm I./35, two 15.2 cm, two 7.6 cm, two 12 prs*) lays with its bow on the outside the pier of Zeebrugge, anchors with stern and bow anchors, connects to the inside of the pier via the bow by means of a catwalk about 24 m long and 3 m wide. 254

English blocking plans

This specially constructed walkway is intended to fold over the pier's parapet like a hinge and allow the assault troops to run up from the monitor's forecastle to the top of the pier and from there to storm down onto the pier itself.

- 3. Simultaneously monitor "General Craufurd" (two 12" L/35, two 15.2 cm, two 3" two 12 prs*) cast anchor west of "Sir John Moore" alongside the jetty with bow anchor and fired at the lock gates at a distance of about 1800 m with 30.5 cm, while the 15 cm kept the aircraft hangars and other mole systems under the strongest explosive shell fire. German destroyers and torpedo boats lying at the pier are put out of action by artillery fire and assault troops.
- 4. The operation is camouflaged by foggy motor boats.
- 5. Just before deploying the monitors, destroyers will fire at the pier batteries to divert their attention from the monitors.
- 6. Laying down of the "Sir John Moore" without tug assistance, the "General Craufurd" with the help of a towing destroyer.
- 7. The blocking in Ostend and Zeebrugge will be carried out by old cruisers. The plan of blocking by merchant ships is not pursued.

On December 18, 1917, a briefing on the matter was held at the Admiralty, at which Admiral Baron explained his plan. The result was a combination of the proposals; Blockade of both ports by cruisers and simultaneous attack on the Zeebrugge Mole. There was, however, a fundamental difference between the views of Admirals Bacon and Roger Keyes. For Admiral Bacon, the destruction of the lock systems by artillery fire and the direct attack on the mole were essential. He considered the blocking action practically useless and only accepted it to further his main plan because the Admiralty strongly recommended it. Admiral Roger Keyes saw the essentials in the blocking.

Further preparations were now placed in the hands of the responsible front leader, Vice-Admiral Bacon, who was soon replaced by Rear-Admiral Roger Keyes. After assuming his position on January 1, 1918, Admiral Keyes, as the new leader of the Dover Patrol, decided to have the attack on the mole and landing of the assault troops carried out not by monitors but by an old cruiser. He dropped artillery shelling of the lock gates through a monitor because the lock gates were likely to be retracted into their lock chambers at the first sign of danger.

^{*) 12-}pound howitzers for steep fire. 255

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The seamanlike handling of a poorly maneuvering monitor, which was also equipped with an auxiliary bow and the cumbersome gangplank on the forecastle, was considered too difficult with a current of 3 nm and the intended landing via the bow. Also, the big catwalk's sensitivity to gunfire seemed too great to risk everything on that card. On the other hand, Admiral Keyes saw in the direct attack on the pier proposed by Admiral Bacon a substantial support of the actual blocking objective. In addition to the intended elimination of the pier battery, the mooring of a cruiser with assault troops, the storming of the pier and the fight against the pier crew had to be at least one excellent diversionary maneuver if it was skillfully timed in connection with the arrival of the blockships. Another plan was worked into the pier attack itself: a viaduct connecting the Zeebrugge pier with the land was to be destroyed by submarines filled with explosive charges, the connection between the pier and the land was to be cut off and the possibility of bringing in support forces prevented.

The preparations were started with the utmost energy. The venture consisted of three main parts:

- 1. Mooring of a cruiser at the Zeebrugge pier and landing of troops on the pier.
- 2. Destruction of the connection between the pier and the land.
- 3. Simultaneous blocking of the entrances to Ostend and Zeebrugge by blockships.

All measures were kept strictly confidential. An essential relief of the enterprise, which was afflicted with many coincidences and unknown dangers, was the most precise knowledge of the target of the attack and all local facilities; because the entrances to Ostend and Zeebrugge as well as the installations on the Zeebrugge Mole were known in every detail. Knowledge of the Zeebrugge Mole had been deepened by Belgian engineers who had been employed in the creation of this structure; Reconnaissance of all kinds had done the rest. The attacker had the most precise documents at his disposal, on which the preparations could be based in detail.

The pier of Zeebrugge begins west of the exit of the Zeebrugge Canal, about 900 m from it; it describes a 2.5 km long semicircle to the east. From the beach it is an overconcreted riprap and merges into a 300 m long viaduct resting on iron pillars. After the viaduct, the pier begins, which will soon be widened to 75 m. From here it has a length of 1.7 km and then tapers at the extreme end to a 4.5 m wide and 250 m long mole head. The lighthouse stands at the extreme end of the pier head.

The artillery equipment on the mole had not been properly recognized by the English reconnaissance. Six 8.8 cm guns were assumed to be on the pier head and three 10.5 cm guns perpendicular to this on the extreme end of the pier itself. In fact, there were only three 10.5 cm and two 8.8 cm guns on the pier head, the so-called pier battery. ²⁵⁶

Page 241 Preparation of the operation against Zeebrugge

Just inside the pier battery on the eastern part of the actual pier, on a shelter reaching up to the level of the pier wall, was a pivoted anti-aircraft platoon of two 3.7 cm machine guns, which the enemy had correctly identified. An infantry position was also expected to seal off the pier battery to the west.

The installations of the seaplane station on the mole as well as the large sheds of the Flanders destroyer flotilla, the port company and the seaplane station had been recognized correctly. On the at low water about 7 m above sea level. i.e. At the foot of the pier ("Mole Court"), which is at sea level, a protective wall ("Mole Wall") with a parapet is set up towards the sea, with the upper edge of the parapet at low tide about 12 m above sea level. i.e. is sea level. The proportions of these details were essential for the choice of the cruiser, its docking maneuvers at the pier, the assault troops climbing over the pier's parapet and reaching the pier yard.

A suitable merchant steamer with a high freeboard, at the same time fast, easy to manoeuvre, stable and with a shallow draft to reduce the risk of mines was not within reach. The choice therefore fell on the cruiser "Vindictive", which, apart from the draft, had the required properties and could be prepared for the special task through conversions. "Vindictive" was launched in 1897, weighed 5850 tons and had a maximum speed of 19 nm built and originally armed with ten 15.2 cm, eight 7.6 cm and one 4.7 cm guns. On the port side, with which the cruiser was to dock at the mole, an auxiliary deck was set up, reaching from fore to aft at the level of the barring (boat deck) and with the boat brackets removed. From here the landing troops were supposed to storm the breastwork via 18 catwalks that could be folded up onto the upper edge of the mole. The preparatory assembly of the landing troops on deck was provided on the starboard side; three wide ramps led from the starboard upper deck to the storm deck and to the gangways leading to the jetty. The foremast was shortened by the end protruding over the foredeck. A part of the removed main mast was removed to protect the port propeller by laying it horizontally across the quarterdeck, the reinforced mast base protruding over the ship's side as a fender. Additional fenders were added underwater and at the level of the forward bridge for protection when berthing and alongside. For mooring at the mole, heavy loading booms had to be lowered over the breastwork of the mole.

The armor has been fundamentally changed. Of the 15 cm guns only two each remained on the port and starboard sides on the upper deck. The port side of the upper deck was additionally armed with three machine guns (pom-pom), 10 machine guns (Lewis) and four groups of four (a total of 16) mortars (stokes mortar). In addition, a flamethrower was installed on the upper deck abeam of the bridge and aft. The foredeck received two machine guns and six machine guns in order to be able to reach over the breastwork of the pier. ²⁵⁷

7. Flanders to May 1918

Howitzers were set up to attack the pier battery, to shell the lock gates and the installations of the flight station on the pier, namely a 28 cm howitzer on the aft deck, a 19 cm howitzer on the forecastle and on the rear part of the storm deck.

Only the first wave of the landing troops was to be accommodated on the "Vindictive", if only so as not to expose the entire landing troops to the danger of mines. To accommodate the rest of the landing troops and to secure the "Vindictive", two ferries, "Iris" and "Daffodil", prepared. These stable vessels were said to be practically unsinkable: they were very heavily divided (double hulls) and went only 3.5 m deep. They were armored with steel plates against machine gun and artillery fire and also suitably prepared for the enterprise. Disembarking the troops from the low ferries promised to be difficult. If it was not possible to walk alongside the "Vindictive" and climb over the cruiser, the assault troops had to use long ladders to reach the breastwork without being able to lie down safely alongside the mole; and fasten the draggens to the mole wall or the mole yard could become a dubious seaman's manoeuvre.

Five old cruisers were prepared as blockships: "Thetis" (1890), "Intrepid" (1891) and "Iphigenia" (1891) for Zeebrugge, "Sirius" (1890) and "Brilliant" (1891) for Ostend. These about 3500 "The large cruisers were 91.5 m long. They were equipped with reserve command and control posts and reserve command elements. All parts important for the ship's command were well protected against machine gun fire; the machine, boiler and rudder systems below deck were secured by cement, to ensure that the ships could hold out under gunfire and at the same time to make it more difficult to remove the wrecks later. To sink the ships, explosive charges with ignition devices from all command posts were provided in the lower parts. The crews were to be secured by fog machines when they got out and escaped. The masts have been removed to make the ships as unobtrusive as possible. All precious metals and unnecessary fittings were rempved. The three forward guns — one 15 cm and two 12 cm — remained on board with 20 rounds of standby ammunition to keep the blockships defensible on approach against the mole battery. The draft was brought to 5.8 m for the Zeebrugge block ships and to 6.7 m for Ostend.

To blow up the viaduct, the 330 tons submarines "C 1" and "C 3" from a series from 1906 to 1908 were equipped with 5 tons of explosives in the bow. The igniter could be timed to allow time for the crew to disembark, depending on the circumstances. So that the submarines could be brought to the viaduct in the last part of the approach, if necessary even without a crew, they were equipped with an automatic steering apparatus operated by gyros. For all cases, measures were taken to rescue the crew with motor dinghies and escort boats; in extreme cases the crew could disembark via scaling ladders to the viaduct and the jetty. ²⁵⁸

Provision of personnel and material

The material preparations were completed by the provision of light buoys for navigational designation of the approach routes, the production of anchored fog buoys and flare rockets and parachute flares that were to be thrown by aircraft. For flamethrowers, fog machines, phosphorus hand grenades, etc. to be carried by the landing party, as well as flares, which were to be fired from "Vindictive" to illuminate the pier head for the landing party and the blockships, the most precise material and personnel planning was made.

"Vindictive" and the five interlocking cruisers were prepared at Chatham, "Daffodil", "Iris" and the two submarines at Portsmouth.

The personnel for the operation - including the commanders for the blockships and the assault ships - were largely selected from volunteers of the Grand Fleet; plus a battalion of marine infantry (4th Battalion of the Royal Marine - 580 men (1). Admiral Beatty understandably agreed to the delivery of a not inconsiderable number of particularly good officers and men from the Grand Fleet; after the decisions made on the basis of the German attacks against the Norway convoy, deployment of the Grand Fleet was unlikely (2).

Unmarried men were generally selected as volunteers from the Grand Fleet; the reports for the mysterious, as dangerous (hazardous) designated operation were very numerous. Four main departments were formed:

- 1. Sailors' Assault Squads under the command of Captain H.C. Halahan, numbering about 200 men (3); their training took place in Chatam. They were accommodated there on the battleship "Hindustan", which had been converted into a living quarters.
- 2. Marine Assault Squad led by Lieutenant Colonel B. H. Elliot; training at Deal (North Dover).
- 3. A demolition squad composed of sailors and marines led by Lieutenant Commander C.C. Dickenson.
- 4. A naval gunnery platoon trained to operate the howitzers and machine guns at Shouburyness (Thames).

A fireworks team consisting of 34 special personnel was assigned to operate the numerous special weapons — flamethrowers, rockets, etc. m. — preformed.

The special detachments, which were subject to the utmost secrecy, were trained in trench warfare with hand-to-hand combat weapons and in the destruction of specific targets, such as could be expected on the Zeebrugge pier.

- 1) Keyes. II. p. 317.
- 2) See above p. 98 ff.
- 3) Keyes. II. p. 317.²⁵⁹

7. Flanders to May 1918

An exact replica of the Zeebrugge pier was built at King Down near Deal, and all the details were drilled out on this model.

As a camouflage to the outside world, a letter marked as strictly confidential was sent to the heads of various command posts, in which it was announced that special units of sailors and marines would be made available and trained as destruction squads, in order to be able to use artillery and destroy facilities. The provision of the blockships was explained by the possible necessity of blocking Calais and Dunkirk.

At the end of March 1918 all preparations had been made, 1 flotilla commander, 4 destroyers, 12 coasters and 10 motor launches joined the formation; In early April the block and assault ships and "Hindustan" rallied on the Swin (North Thames). The Marine Infantry Battalion was transferred from Deal to Dover on April 6 and taken to the Swin on a transport steamer; one company was transferred to "Vindictive", the troops destined for "Daffodil" and "Iris" were first housed on "Hindustan". The secrecy was lifted within the group of participants on April 7th, the details of the operation were announced to the crews and the connection with the country was severed except for carefully checked mail. The time on the Swin was used to train the crews on their respective ships.

The timing of the undertaking was primarily dependent on the blockships having to find deep enough water to enter the entrances to Zeebrugge and Ostend. The question of the water level had to be reconciled with a number of other circumstances; this severely narrowed the time periods in which the attack was even a possibility.

In both ports, cruisers could only enter the entrances at high tide. The shallowest water depth at spring low water was 3 m in Zeebrugge and 4.6 m in Ostend. The tidal range in Zeebrugge was between 3.6 and 4.3 m, in Ostend it was around 4.5 m was geared towards surprise, only night-time flood periods came into question. The last part of the advance had to be as long as possible - at least 20 nm - in darkness, but it was also extremely desirable for the "Vindictive" and its cover forces to have a few hours of darkness available for the return march. According to these considerations, only high tide times between two hours after dark and four hours before sunrise came into question. From walking alongside to casting off the "Vindictive" was initially calculated with a time of 40 minutes. The more time there was for the approach in the dark, the better for the element of surprise; on the other hand, an attack advanced too far before dawn made the retreat more or less hopeless because of the long range of the Flanders coastal fortifications. ²⁶⁰

The English Plan of Operations

Bright moonlight was dangerous to the enterprise; as a result, about half of all the nights of the month were canceled from the outset, leaving about 4 to 5 days in each lunar period when the tides and lunar conditions fully corresponded to military requirements.

The direction and strength of the wind were also important factors in the ability to approach the coast unnoticed. Camouflage by artificial fog was essential and only achievable when the wind was onshore. Too strong winds and rough seas prevented the participation of the indispensable motor boats, natural fog made precise navigation difficult.

The favorable days of the lunar period in March 1918, which were planned as the earliest point in time, could not be used because the preparations had not yet been completed. The first opportunity to attack did not exist until the period of darkness beginning on April 9th.

With a favorable weather forecast and a northerly wind, Vice Admiral Keyes ordered the attack on April 11. For the forces of the Swin, this meant sailing at 5 p.m. The departure, meeting points and advance of all forces involved from Dover, Dunkirk and Harwich were precisely regulated in accordance with the advance of these forces, which was precisely determined in terms of time and navigation. The Dover forces advanced in two groups. A group, cruiser "Artentive", flotilla leader "Scott" and three Harwich destroyers advanced to a breach (point G) in the English net and mine barricade in order to guard it. On the way there, at two navigational points (points C and D), one destroyer was to be left behind to provide navigational assistance for the formation. At the same time, this group was to act as weather scouts on the spot and was supposed to inform the formation about the situation with a weakly adjusted light signal. The bulk of the Dover forces joined forces from the Swin north of the Goodwin Sands (Point A). After assembling at 8:30 p.m. (Point A), Vice-Admiral Keyes on the destroyer Warwick was in command. To secure the formation, he had 10 other destroyers, 24 coasters and 30 motor launches with him. The small boats were divided into several groups to avoid smoke screens to blow off and throw fog buoys; individual boats were to attack directly inside the mole with machine guns. Other boats were assigned to salvaging the crews of the blockships and to picking up the submarine crews after the blast at the viaduct. The coasters and the two submarines were towed by destroyers and blockships. When the weather was unfavorable for the small vessels, the generation of the artificial fog could be assigned to four patrol boats (P-Boats) or destroyers.

As a prelude to the actual blocking operation, it was intended to attack Ostend and Zeebrugge from the air on the same night and to shell them from sea through monitors, a measure which was inexpediently designed to alert the attacking coast. The combat groups intended for the bombardment had assembled at Dunkirk; they set sail in the course of the evening in order to independently head for their bombardment positions. The two monitors "Erebus" and "Terror" were provided for the bombardment of Zeebrugge, with three destroyers and a number of smoke boats to back them up. ²⁶¹

7. Flanders to May 1918

"Marshall Soult" and "General Craufurd", covered by flotilla commander "Faulknor", 7 destroyers, 6 coasters and 22 motor launches to Middelkerke Bank, "Lord Clive" and "Prince Eugene" with smoke boats and three marched for Ostend and the coastal batteries lying there French destroyers for cover to Westdeep. Furthermore, two groups sailed from Dunkirk, each consisting of a small monitor and a few French torpedo boats and motor launches, to mark the way after dark with light buoys. To cover the entire operation against disturbances from the German Bight 4 cruisers, 2 destroyer leaders and 2 destroyer divisions of the Harwich forces ran to a position north-east of Zeebrugge Apart from the Harwich forces, a total of 146 units under Vice-Admiral Keyes were involved in the operation.

The "Vindictive" was entrusted with the navigational management of the formation, which had "Iris", "Daffodil" and a coaster in tow. Admiral Keyes on "Warwick" wanted to be as independent as possible and positioned himself south of the entire formation. The formation was secured by aircraft until nightfall, which was to hunt down German reconnaissance aircraft and at the same time provide tactical reconnaissance.

The advance went smoothly on a very dark night and calm sea. At point D the formation stopped and the excess crew of the blockships were disembarked. 53 men stayed on board, 35 went into the motor boats. Meanwhile the wind had died down completely and seemed about to turn to the south. Since the absolutely necessary camouflage by means of artificial fog could only be ensured when the wind was northerly, Admiral Keyes made the decision to abandon the operation for the night and turn back. During the turnaround, a coaster was lost through ramming. The bombardment of Ostend by the four monitors and planes was carried out as planned; when the port entrance of Ostend was attacked by a motor torpedo boat, maps and blocking plans fell into German hands, as mentioned (1). On the other hand, "Erebus" and "Terror" gave up the planned bombardment of Zeebrugge under the changed circumstances.

On the evening of April 11, "A 4" and "A 14" of the Flanders Minesweeper Half-Flotilla (Kapitänleutnant d. R. Schladebach) left for a patrol between Ostend and Blankenberghe buoy. On entering both boats came at 12:10 a.m. in the line of fire between Ostend and the monitors firing at them; they turned around in front of the harbor entrance and sailed at high speed and on an ENE course. The boats had not noticed anything unusual at sea beforehand. At about 1:30 a.m., "A 14", which was in the rear of the formation, noticed an enemy motorboat about 400 m astern. When "A 14" wanted to open fire, it got caught in a fog bank caused by the motorboat and lost, about 15 Minutes driving in the fog, the feeling. The boats arrived in Ostend at around 3 a.m. Their patrols had done nothing to clarify what was happening under the coast.

1)	See	page	$229.^{262}$
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Page 247 Insufficient German protection

As usual, the coast was alerted as soon as the shelling began.

The fighting on the night of April 11th/12th, 1918 was not perceived as unusual and would hardly have led to special measures of increased readiness on the coast. Meanwhile, the order found in the captured coaster No. 33 about an intended blocking of Ostend called for special attention. Increased readiness (war alert state) was therefore ordered until further notice, which should ensure a rapid transition to the state of alert on the coast. This measure had not become known in all places; to the pier battery — 4/M. A. R. I — and the torpedo boats lying at the pier, nothing of the order and its cause had got through, so that no countermeasures going beyond the previous and normal level were prepared.

Long-distance aerial reconnaissance identified numerous light forces and monitors in Dunkirk and Dover on April 12, so that the commanding admiral concluded that the enemy was planning major operations and did not rule out a repetition of the attack. In the next few days there was initially no flying weather; it was not until April 19th that Dunkirk could be seen again in poor visibility, without precise observations being made. The bombardment of Ostend on April 20th, during which the batteries east of Ostend from land were hit with a few shots, apparently to shoot in heavy batteries, and the laying out of new buoys in the outer fairway indicated the possibility of larger-scale attack intentions. Although the intensity of the air raids and shelling during this period was by no means particularly heavy. The reconnaissance flights in the following days also revealed nothing special. On April 22, the weather was unfavorable in the morning, and in the afternoon reconnaissance was only flown in the nearer sea area with not very clear weather.

German forces had not received orders for increased patrol duty after April 12, 1918. An uninterrupted and extensive night patrol service off the coast by torpedo boats was not feasible, since the boats were just sufficient to carry out the mine and net clearing off the coast vigorously. The Marine Corps had 7 destroyers, 8 A-II and A-III boats, and 5 A-I boats as combat-ready torpedo boats. The rest were in repair and boiler cleaning. As a result of stormy weather, the normal service at the mine and network barriers as well as the usual inspection drives had to be canceled until April 16th. It was not until April 17th that the formations resumed their routine voyages in the foreshore, which were often interrupted by rough seas or fog. At 4 a.m. on April 18, the Flanders Destroyer Flotilla with 6 destroyers, led by Korvettenkapitän Albrecht, fired around 600 rounds at military installations near La Panne and Coxyde at the request of the army high command. Counteraction by land batteries was ineffective, enemy naval forces were not encountered.

7. Flanders to May 1918

Based on his many years of wartime experience on the Flemish coast, the Commanding Admiral was of the opinion that laying out torpedo boats in outposts at night was of no value against surprise attacks if visibility and the possibility of observation were low. The presence of our own armed forces in front of the harbor also forced our own coastal artillery to exercise caution when it suddenly became necessary and brought uncertainty to the fire control. The 1st Marine Division, which regulated the patrol duty day after day, was therefore ordered to cancel patrol trips on days when they promised no benefit. This was the case in rough seas and in unsightly weather; there was little chance of the boats noticing an approaching enemy in time, especially if they did not cover the whole sea area off the coast in a tight belt. Sending the motor boats of the Flemish Motor Boat Division, which at the time consisted of only three boats ready for war, on night patrols was not planned, since these boats, with their relatively high minimum speed, were not suitable for either patrol duty or keeping in touch. Accordingly, no special arrangements had been made for air reconnaissance and naval forces to report blocking formations leaving Dover or Dunkirk as early as possible.

On April 13, the wind turned again from the north with considerable force. Admiral Keyes gave the order for the formation lying on the Swin to leave, but after two hours, as the wind continued to pick up, the operation had to be abandoned, which was now abandoned for this high-tide period. The commander of the Dover Patrol was in a difficult position. The two blind attempts on April 11 and 13 could have been disastrous for the success of the attack, since numerous English and neutral merchant ships had sighted the vehicles of the special unit, which were very conspicuous in their appearance, and the element of surprise could thus be limited. Waiting for the next high tide period at night, which coincided with a favorable phase of the moon, would have meant a delay of about three weeks, a highly undesirable delay in view of the Admiralty's urging to finally abandon the operation. Admiral Keyes therefore decided to make the attack independent of the phase of the moon and to schedule it only for the next suitable high tide period: between April 22nd and 28th the night high tide was favorable.

On the first day of this period the weather conditions were uncertain, but not exactly unfavourable. The wind turned to NE at midday, the weather forecast held the direction to be constant. Vice Admiral Keyes gave the execution order. The formations put to sea according to the times fixed for that day; at 2 p.m. the forces from the Swin and from Dover assembled at buoy A, the commander on "Warwick" seated himself in front of the right rank. After dark visibility was eight to ten feet under a full moon, but soon diminished under hazy Weather to less than 1 nm.

The bombardment unit for Zeebrugge left Dover at 2:10 p.m. in order to take up its bombardment position near Westkapelle in good time so that at 12:10 a.m. fire could be opened against Zeebrugge. The bombardment of the batteries at Ostend and Zeebrugge was to begin 40 minutes before an ordered no-stop time, which coincided with the passing of the flagship at buoy 6 and was prudently set at 11:30 p.m. ²⁶⁴

Page 249 Beginning of the Enterprise on April 22, 1918

Due to the uninterrupted advance to buoy 6, the zero time did not need to be changed. As a result of the weather, which had become very unsightly during the night, the air raid planned for about an hour before the bombardment was cancelled. At 12:30 am on April 23, "Erebus" and "Terror" opened fire. As soon as the bombardment began, the Sailor Artillery Regiment I, which was responsible for defending the eastern section of the coast, was alerted. Shortly thereafter, the infantry was alerted. The enemy fire was near the harbor with its first shots, soon spread to the area behind the Heyst locks and Dünbergen, where it remained far from any military targets throughout the shelling until 2:45 a.m. The sound measurement team found two enemy units 12 km north of Heyst, muzzle flash was not visible. The heavy coastal battens fired on the shelling ships held after the impacts for monitors of the newer type. The light batteries laid a flare belt off the coast and especially off the port of Zeebrugge.

The monitors intended for the bombardment of Ostend left Dunkirk at 9:35 p.m. on April 22, independently of the main unit. The bombardment in front of Ostend began punctually at 12:10 a.m.; the bombardment formation with its cover forces was composed as on April 11th. "Marshal Soult", whose bombardment position was at the southern end of the Middle Bank, fired on the batteries Deutschland, Beseler and Cecilie as ordered, "General Craufurd" 43/4 nm WNW of "Marshal Soult" fired on the batteries Hindenburg, Aachen and Antwerp. "Prince Eugene" and "Lord Clive" anchored at the eastern end of the Westdeep to bombard the batteries in Tirpitz and Aachen. For navigational support, coasters had anchored the howling buoy at Stroombank, the bell buoy at Ostend and calcium buoys at the western and eastern harbor entrance of Ostend. There was also calcium buoys at the light buoy a motor launch was laid out to help with the approach of the blockships with light signals. French destroyers, torpedo boats and motor launches provided the smokescreen. The first shots had resulted in the immediate alerting of the Sailor Artillery Regiment II of the coastal defense of Ostend. The firing enemy was about six units strong in the sectors west to NW, 15 to 18 km from Ostend. The heavy coastal batteries of Prussia, Tirpitz and Deutschland fired on the individual monitors with the help of the sound measuring squads and also at the sometimes visible muzzle flash. At 1:15 a.m. the north-westerly wind turned to SSW and loosened the artificial fog. Extensive use of flares, in conjunction with all searchlights, enabled the Ostend Coastal Artillery's medium and light batteries to intermittently fire on targets that became visible. The German fire was close by around the monitors, especially at "General Craufurd", who escaped hits only by chance. The shelling, which lasted until 2:05 a.m., was ineffective despite the large expenditure of ammunition by the enemy; individual hits in the battery areas caused no damage²⁶⁵.

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7. Flanders to May 1918

During the bombardment of Ostend it was observed that light enemy forces, mainly motor boats, laid a thick layer of fog off the coast, which almost hid enemy activity. The fog was extraordinarily thick, at times impenetrable. The flares of the Ostend batteries, together with their searchlights, continuously illuminated the sea area, while at the same time the prescribed outer and inner barrage belts were placed in front of the entrance at certain intervals. Occasionally noticed lights were aimed at. Due to the lack of a pier port, the barrage of Ostend could be designed much more effectively than in Zeebrugge, where consideration had to be given to the own vessels lying in the pier port.

The advance of the English attacking force had to be carried out in daylight for the most part, and proceeded in the same way as on April 11th. At about 10 p.m. Vice-Admiral Keyes gave the final order to carry out the operation about 28 nm from the Zeebrugge pier based on the prevailing weather conditions. Buoy D was reached shortly after 11 p.m. The formation stopped for a short time, the coasters being towed were thrown loose and the superfluous personnel of the blockships handed over. Due to the failure of a coastal motorboat, the entire crew of 84 instead of 54 had to be left on board "Intrepide". Exactly at the intended time, at 11:30 p.m., buoy G was reached and the Attentive group set up there by the barrier gap passed. The group split off from Ostend was detached. Two groups of destroyers, led by "Warwick" and "Whirlwind", moved 1 nm ahead in order to protect against any German patrol vehicles that might be at sea in order to lay smoke screens in front of the attack force up to just below the Zeebrugge pier and to camouflage the attack force at certain points by laying out fog buoys. Some coasters had to replace the laid out fog buoys at intervals of about 20 minutes. The attack against German torpedo lying about on the inside of the pier boat forces sent forward; at the same time, they were to create fog within the mole to protect the blockships. At 12:30 a.m. "Warwick" passed Blankenberghe's light buoy; 10 minutes later the last two coasters were sent forward to throw fog buoys close to the lighthouse immediately outside the mole and to fire at the mole with light weapons as a distraction during the mooring maneuver of the "Vindictive". Both boats pushed through the dense walls of fog: they were the first to approach the mole head and fired on the mole. A motor boat fired a torpedo at what it mistakenly believed to be a destroyer lying out alongside the mole, witnessed a hit near the forward bridge, while other boats shelled the mole with mortars. Engine noises were heard on the German side, the torpedo shot was taken for an impact of the monitor bombardment.²⁶⁶

Approach of Assault Unit

Due to the increased engine noise, flares were fired, one of which fell on the deck of the destroyer "Myngs". The barrage opened shortly before 1 a.m. by the German shore batteries was noticed by the English assault force and was already seaward of the enemy.

When the motorboats turned seaward, "Warwick" with "Phoebe" and "North Star" had reached the stand-by position at the level of the mole. Admiral Keves hoped to be able to watch the attack on the mole and the break-in of the blockships into the harbor from his position. Since the landing raid was primarily intended to eliminate the German mole defenses or at least distract them from the core of the enterprise, the blockships, the advance of "Vindictive", "Daffodil" and "Iris" towards the blockships was coordinated in such a way that "Vindictive Laying alongside the mole for too long, as was rightly believed on the English side and as later events confirmed, would possibly divert the attention of the mole defenses from the Vindictive again - and can steer towards the approaching blockships. The submarine demolition at the viaduct was scheduled to coincide with the start of the "Vindictive" attack on the pier.

The report of the bombardment of Ostend reached the air defense commander on the pier at 12:19 am on April 23rd. At that time, the crew of the pier battery was not yet on increased standby. On the guard there were Oberleutnant d. R. d. M. A. Rodewald, Chief Artilleryman's Mate Harms, the gunnery, the fire-control posts and the telephone exchange personnel. The weather was cloudy with low-hanging clouds, light rain was falling, the light buoy lying about 7 nm away from the entrance to Blankenberghe could still be seen from the pier battery until 0:20 a.m.; the sea was calm, there was a weak breeze from the north-west, and high tide was to be expected at 12:45 a.m. The battery commander of the mole battery, Kapitänleutnant d. R. d. M. A. Schütte, had returned from Bruges around midnight and was in the area of the mole battery from that time onwards. The security staff, used to nightly air raids, attributed the engine noise heard between 12:20 a.m. and 12:30 a.m. to air raids and initially saw no reason to increase readiness. When the noise did not subside and gradually differed from the well-known engine noise of the planes, Oberleutnant d. R. d. M. A. Rodewald fire an 8.8 cm flare. The bursting of the projectile was clearly heard and a faint glimmer of light was seen above a fog bank coming from the west, but this disappeared immediately. The Blankenberghe light buoy could no longer be seen; it was now 12:30 am. Oberleutnant d. R. d. M. A. Rodewald had another flare fired, the bursting of which could also be heard, without a glimmer of light being immediately discernible. After observing for a long time, a number of columns of smoke, running in a pointed cone, rose above the water level in the west against the light shimmer of the falling fluorescent screen. Based on this observation, made by Oberleutnant d. R. d. M. A. Rodewald and Obermaat Harms was made at the same time, Oberleutnant d. R. d. M. A. Rodewald alarm for the whole coast.²⁶⁷

7. Flanders to May 1918

At about the same time, the bombardment of Zeebrugge by "Erebus" and "Terror" began.

The air defense commander alerted the machine anti-aircraft platoons Molenkopf and Molenfuß and at 12:35 a.m. had the Württemberg battery, which was located on the beach just west of the mole, fire flares towards the mole in the direction of the mole in response to the report of engine noises. The Düne searchlight was brought forward to the

response to the report of engine noises. The Düne searchlight was brought forward to the sea position, and the Molenfuss searchlight was made bright. The light beams from the searchlights were not very effective because of the hazy air, and the water areas in the immediate vicinity of the pier were in the blind spot.

At the first alarm order, Kapitänleutnant d. R. Schütte in the battery, which was fully ready to fire in about 3 minutes. In this tent the fog grew stronger, an unfamiliar smell of the fog made itself felt; the engine noise increased in volume and intensity, but at first there were no vehicles to be seen. Until the alarm was raised by the officer on watch of the mole battery, gunfire had not been heard from either the shore or the sea. In the now very dense fog, which was being blown to and fro by a light wind, the outlines of smaller motor vehicles appeared vaguely and quickly disappearing several times. Kapitänleutnant Schütte did not allow the battery to fire into the fog; the mole searchlight could at times penetrate the fog up to a maximum distance of 500 m. The mole battery was ready to fire for about 5 to 10 minutes when suddenly at 12:50 a.m. a larger vessel appeared from the right in front with a parallel course to the battery to the left in the headlights about 500 m away, which blew off steam violently and the mole battery came under heavy fire with guns and machine guns. It was the Vindictive approaching the pier.

The "Vindictive" had shortly before broken through the last veil of smoke, and the mole had been seen from her bridge for the first time. The German flares created a brightness that made orientation easier from the "Vindictive" and roughly corresponded to the illumination in the early morning twilight. The lighthouse became clearly visible. The commander took the middle of the pier right ahead, had the oars laid hard, used all his power and set about the intended berthing maneuver immediately west of the pier battery in order to get safely into the blind spot of the guns on the pier.

A densely packed crowd of people could be clearly seen from the pier battery with the naked eye on the deck of the cruiser and on the superstructure. Kapitänleutnant Schütte recently fired on this large target at a distance of 500 m with the three 10.5 cm guns of the pier battery in quick succession, while the 8.8 cm guns of the pier battery and the Württemberg battery fired flares. The Mole anti-aircraft gun platoon, under the direction of Oberartilleristenmaat Scheidt, simultaneously opened fire with the two 3.7 cm. These knit the deck and superstructure of the "Vindictive" as well as the two ferries "Daffodil" and "Iris", which were noticed by the anti-aircraft platoon. During this time, "Vindictive" shelled the pier with machine guns and machine guns from her high bridge and battle top. ²⁶⁸

Page 253 "Vindictive" at the Mole Zeebrugge

This first very effective bombardment of the "Vindictive" by the pier battery did not last long, because the cruiser soon disappeared again in a westerly direction in the fog. Only during and after the passage of the "Vindictive" was the fire of the monitors "Erebus" and "Terror" consciously noticed, without any disturbances in the mole defense having occurred.

After the "Vindictive" under the leadership of her Commander, Captain A. F. B. Carpenter, had passed the battery and had come out of sight, the pier battery initially had no destination. Only when a few motor boats again in front of the battery and the harbor entrance in the fog drifting back and forth were to be seen, Kapitänleutnant Schütte had a few volleys fired without any hits being detected.

Numerous hits on the hull, on deck and in the superstructure of the "Vindictive" were observed from the pier battery. The personnel and material losses on the "Vindictive" were indeed very heavy. Within two minutes of the cruiser clearing the last layer of smoke, the commander of the Sailors' Landing Corps, Captain H. C. Halahan, the commander of the Marine Infantry Assault Detachment, Lieutenant-Colonel B. H. Elliot, and his second-in-command, Major A. A. Cordner, had fallen. Several officers were badly wounded, the casualties of the crew great, the 19-cm howitzer disabled, their gun crews dead (1). The flame-throwers were also destroyed. But what was most alarming was that the movable emplacements through which the storm detachments were supposed to storm the breastwork had been shot up for the most part.

The "Vindictive" was commanded on the port side from a breastwork protected against machine-gun fire and shrapnel. The commander did not succeed in bringing the cruiser to the pier immediately west of the batteries, from where the assault detachments could, at best, use the main defense position of the Mole should have overpowered. The "Vindictive" was brought up to the mole three ship lengths west of the intended landing place: the ship touched the mole a minute after the ordered time, at 1:01 a.m., with considerable speed, which was well contained by the strong fenders. The commander, supported by the easterly current, tried to put the ship in the right place by reversing over the sternpost and walked the engines back and forth several times. Recognizing the details on the pier proved to be much more difficult than had been assumed after the detailed preparation. For the rest, time was of the essence. Maneuvering in the current was not easy; when trying to drop the starboard anchor, the chain did not run out, as a result, the port anchor was dropped immediately at the mole. The current, however, caused the ship to shear so far that the few remaining links could not reach it. After about 5 minutes of unsuccessful sawing back and forth at the mole, the situation began to get critical. In this

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At that moment "Daffodil" and "Iris" appeared on the plan. Neither had suffered any damage so far. "Iris" (Commander Gibbs) steamed past "Vindictive" as ordered and tried in vain to moor at the mole about 100 m in front of her. Officers and crew of the "Iris" who had advanced to the mole tried to fasten mooring draggens on the mole; they were shot down by the port company (company Kapitänleutnant Schultz). Finally "Iris" gave up the attempt to moor; the starboard anchor that had already been thrown was slipped and the ship was fastened to the starboard aft of the "Vindictive". The attempt to bring landing troops directly from the "Iris" to the mole had failed. But so much time had passed before disembarkation began across the Vindictive that people from the Iris could hardly get ashore. "Daffodil" (Commander H. S. Campbell) supported the "Vindictive" going alongside by laying her bow vertically against the forecastle of the "Vindictive" and pressing it against the pier to connect the pier, the rest, except for two, which could still be used later, were destroyed. When the order to storm the mole was given, the cruiser, which was brought alongside at high speed, rolled considerably in its own swell and swell and hit the mole violently with the port side every time it was overtaken. The unsteady position of the ship forced "Daffodil" to keep "Vindictive" pressed against the mole the entire time she was lying alongside. The going alongside of "Daffodil" at the mole failed, part of the "Daffodil" landing troops tried to reach the mole via the "Vindictive". Fixing the anchorage on the pier by the first assault troop was difficult; the derricks proved to be too short.

The first thing to do was to try to gain space eastwards. It was clear that with the removal of the landing site from the pier battery there was no longer any thought of immediately overpowering the pier battery. The first English assault troops under Lieutenant Adams advanced on the mole wall to the Friedrichsort control room, which was unoccupied at the time, occupied it and let some people climb down ladders from the parapet to the mole. As they proceeded further, the troops came across a position from which they fired. Heavy losses forced 'to go back to the control station in Friedrichsort.

The Friedrichsort control center, which was controlled by Lieutenant d. R. d. M. A. Zimmermann had been manned by three men, had to be cleared because the control post was close to the cruiser "Vindictive", was not suitable for defense and, under the given circumstances, was not suitable for artillery control in the fog anyway, because a shelling of the "Vindictive" from the Friedrichsort battery was impossible because of the proximity of their own torpedo boats. Before his position was vacated, Leutnant d. R. d. M. A. Zimmermann was able to observe the events of the crews going alongside and the beginning of the disembarkation and reported his observation by telephone to the Friedrichsort battery (4-17 cm) east of the canal exit. At the same time, he sent the fireworker Westphal to report on the processes of disembarkation, which were invisible in the fog, in the mole battery and on board the torpedo boat destroyers lying in the harbour.

Advance of the English shock troop

At the same time as the pier battery, the 3.7 cm anti-aircraft machine gun platoon and the Friedrichsort control center, all other parts of the crew on the pier were alerted. The troops were in their dugouts, as was usual in the case of bombardment or threatened bombardment. The port company, numbering about 70 men, was stationed close to where the "Iris" landed. They successfully took part in the fight against the Englishmen appearing over the edge of the mole with rifle fire. 7 men from the port company were more or less seriously wounded by machine-gun fire.

On the south-western part of the mole, near the seaplane station, the crews of this station were about 200 men strong. In the event of an alarm, this troop had to deploy to the alarm stations for the close defense of the hangar. They did not take part in the battle, as the shed was removed from the landing place, no Englishman could get there. The fog made it difficult to clarify the situation on the pier, so the crew of the aircraft station were primarily ready to secure their particularly important wartime facility.

After the disappearance of the "Vindictive", the crew of the pier battery noticed that fire was constantly being fired out of the fog at the pier and its buildings as well as at the harbour. There were no casualties in the battery The estimated time of up to 20 minutes cannot be rated highly under the present circumstances — a dispatcher appeared from the anti-aircraft gun platoon about 200 to 300 m from the pier battery and reported that further to the center of the pier enemy troops were landing from the outer edge of the pier. At first, Kapitänleutnant Schütte saw no reason to do anything, presumably because he considered the defense of this attempted landing by the port company lying on the pier and the people from the naval air station to be sufficiently secure and because the battery was only firing the indispensable gun operators and ammunition transport personnel; other people, namely part of the economic staff, were housed in the pier barracks near the pier head. When a second dispatcher appeared soon after with an urgent request for help, Kapitänleutnant Schutte ordered a raiding party to proceed. The second messenger, who at the same time reported that the control room in Friedrichsort had been cleared, was sent by Lieutenant d. R. Zimmermann. The command of the improvised raider squad of the pier battery was Transferred to Oberleutnant d. R. Rodewald. In a hurry he summoned 10 to 12 men, mostly kitchen and mess staff, with the two non-commissioned officers, Obermaat Harms and Maat Junge. In the hurry, most of the people had only got their hands on rifles and not sidearms, and cartridges were put in the pockets of their clothes. Hand grenades and machine guns were initially not within reach, and the pier battery was not equipped with machine guns at all. With this quickly gathered handful of people, Oberleutnant d. R. Rodewald now advanced in leaps of about 50 m on the flat roof of the battery crew's accommodation and the about 2 m wide mole wall.²⁷¹

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The troops were shot over while advancing, so that no casualties occurred. In order not to fragment the small number of forces, no people were employed for the Molenhof, i.e. the platform of the pier, partitioned off. After about 5 to 6 jumps, Oberleutnant Rodewald and his men reached the position of the anti-aircraft machine gun platoon, strong of 1 non-commissioned officer and 3 men, set up on the roof of the concrete shelter leaning against the mole wall; there was also Lieutenant d. R. Zimmermann with his staff stand. There were now about 20 men and 12 rifles, plus the two machine cannons. Only one of the machine guns could be used in the direction of the mole, but could only fire from the elevation to the horizontal, but not down into the mole yard. Oberleutnant Rodewald took command, ordered rear communication to be established with the battery and forbade any firing without orders. The situation was quite confusing. The dense fog was only occasionally torn apart at short distances and for short periods of time. A machine gun firing in the direction of the Molenspitze could be observed ahead on the Molenhof. To the left and abeam of the firing position, the rear gun of the destroyer "V 69" fired in quick succession at a point behind the control room of the Friedrichsort battery. Impacts could not be seen from the position on the mole wall of a ship in the direction of the raiding party.

On the night of the attack, the 2nd Destroyer Half-Flotilla and the Flanders 2nd Torpedo Boat Half-Flotilla were in Zeebrugge from the war-ready naval forces. Of the destroyers, the 2nd Destroyer Half-Flotilla (Kapitänleutnant Zander) was on the inner edge of the pier, from the outside in "V 69", "S 53", "S 63" (command boat). "V 69" was the Landing stage of the "Vindictive" diagonally opposite, the guard boat "S 53" lay near a shed, which increased every view of the pier and the sea. Further inwards were "A 27", "A 30", "A 43" and "A 49" of the Flanders 2nd Torpedo Boat Half-Flotilla (Kapitänleutnant Lütjens). The boats were in normal readiness, only the guard boats were steaming up. Orders for special alert from the coast were not known. Apart from the guards, all personnel of the 2nd Destroyer Half-Flotilla and the 2nd Torpedo Boat Half-Flotilla were in a shelter on the pier in the immediate vicinity of the berths. The firing of single shots and flares had been observed about 15 minutes before high tide.

Kapitänleutnant Zander was on the pier wall before the attack and noticed from there that batteries with flares were firing towards the sea and about 1000 m in front of the pier there was a thick wall of artificial fog, and the faint noise of motor boats could be heard at sea. It was expected that the mole and the locks would be shelled. In this situation, the commander of the half-flotilla gave the order to also send all superfluous personnel of the watch boat to the dugout and to forbid the people to leave the dugout, so that no curious onlookers were harmed on the mole. The watch on "S 53" remained about 15 men strong. Also the chief of the 2nd Torpedo Boat Half-Flotilla, Kapitänleutnant Lütjens, and Oberleutnant z. S. Fleischer, commander of "A 30", who assessed the possibility of the A-boats setting sail for minesweeping from the mole wall, made the same observations.²⁷²

Improvised German defensive measures

The thick, somewhat alien-smelling fog that made leakage impossible was noticeable. Suddenly the alarm sounded and after a while volleys were fired from the mole battery in a seaward direction. Shortly thereafter, in the circle of light from a flare, a large ship with three funnels, apparently a cruiser, appeared, heading for the pier head. The ship was heavily shelled, disappeared in the darkness and was only seen again when it docked at the outer edge of the mole, just west of the commander's station of the Friedrichsort battery. The docking ship, with a battery of very high machine guns, heavily fired the place on the pier between Sheds No. 4 and Z and "S 63". It gave the impression that the pier was under heavy fire from the sea. The described attempt by the "Iris" to moor to the west of the harbor company's shelter was also observed. Kapitänleutnant Zander now assumed that a serious landing was intended. All available men, who found it difficult to get out of the shelters just below the "Vindictive" under the heavy fire of the approaching cruiser, were gathered together, armed with the available means, and stationed alongside the harbor company for the defense of the mole; A machine gun was posted in the harbor company shed, which Oberleutnant z. S. Fleischer had fetched him from his A-boat from the dugout, hurrying across the mole, which was being showered with machine gun fire. The determined intervention of the "S 53" crew under their commander, Kapitänleutnant Kossak, made a particular contribution to the defense. Crew members of "S 63" captured two English machine guns.

The commander of "V 69", Kapitänleutnant Beneke, had also observed the approach of the "Vindictive" from the mole and noticed several motor boats. He did not expect the cruiser to dock at the pier, but believed in a diversionary maneuver to the advantage of the attacking motor boats. He hurriedly went to "V 69" to ensure defense against attacks from the inside of the pier. Kapitänleutnant Beneke only saw the "Vindictive" mooring at the pier from on board "V 69". He now clearly overlooked them Danger for the pier: together with the ensign he managed to get the middle 10.5 cm SK, the only gun on the boat that was still in use, and that the superstructure of the "Vindictive" was still just free of the high water level could take hold of the mole shed to get ready to fire. The distance to the "Vindictive" was barely 300 m. Kapitänleutnant Beneke and Fähnrich z. S. Klintsch operated the gun: the commander fired, the ensign was the loader. Everything ready ammunition that was available was fired into the superstructure, the Mars and the mole circuit at the landing stage of the "Vindictive": after the ready ammunition - about 40 rounds - had been fired, the fire on the "Vindictive" fell silent. The crews of "V 69" could now come back on board, Fähnrich z. S. Klintsch was slightly wounded. "V 69" and "S 53" suffered only minor damage from explosives, "S 63" received numerous machine gun and machine cannon hits in the bridge and funnel.²⁷³

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"Vindictive" had suffered badly. The superstructures were "quickly turned into scrap metal" (1). In the foretop, a grenade knocked out the two heavy and 6 light machine guns. The gun crews were killed except for one gun commander, who was still firing at first; this too was soon put out of action. The heavy howitzer and the undamaged 19 cm howitzer fired at the inland targets intended for these guns, with no success of this shelling. With the loss of numerous guns and men intended for the mole head, the critical situation for the English who had reached the mole reached its climax.

The English squad that had advanced to the control center in Friedrichsort tried to advance against the pier battery from there and came across a patrol sent against the control center in Friedrichsort, a non-commissioned officer and two men from the raiding party. The patrol withdrew to the position of the anti-aircraft gun platoon, the English attackers pushed after them. The Rodewald group had become more combat-capable thanks to a crate of hand grenades that had been brought in from the mole battery.

When the enemy was about 20 m from the Rodewald position, Oberleutnant Rodewald had all weapons fired, including a machine cannon firing tracer bullets. At the same time, the English received fire from the machine gun positioned in the window of the harbor company's shed. English losses were significant. Since there was no support, the English withdrew to the Friedrichsortstand, took cover there and sent an officer to the "Vindictive" with an urgent request for support. Renewed attempts to advance from the Friedrichsortstand collapsed under rifle and machine gun fire.

After a short wait, Oberleutnant Rodewald divided his squad. He had Obermaat Harms swarmed out with about half the men to the Molenhof, where vaguely recognizable hand-to-hand fighting took place around the level of the Friedrichsortstand. Oberleutnant Rodewald himself went ahead with the rest of the men on the mole wall. Up to Friedrichsortstand the pier wall was full of wounded and dying. A serviceable machine gun was captured near the Friedrichsort control post, which was positioned at the corner of the now-abandoned post and used against landing troops that could be seen on the mole wall. This was just before the "Vindictive" departed.

At the height of the "Vindictive" the marine detachment had formed a kind of bridgehead through which the ship was secured from the mole. When a platoon of this detachment, which had already suffered considerable losses on board, was about to advance at the request for support, the decision was made on the "Vindictive" to cast off from the mole again. The Englishmen on the mole had no choice but to withdraw to the "Vindictive" in reasonable order, taking the wounded with them.

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Page 259 Successful demolition by "C 3"

None of the assault detachments had been able to reach their destination, and as a result none of the intended detonations had been carried out. The rest of the landing detachments had made one last attempt from the Friedrichsort control center under their severely wounded leader to advance on the mole wall the entire squad was killed or wounded, only one or two men escaped back to the cover of the Friedrichsort control post. The remains were now collected in order to return to the "Vindictive", taking the wounded with them.

During this fighting a detachment of marines had also advanced westwards on the pier. This action was unsuccessful, as the recall signal sounded before the troop, which had just established itself on the pier, could advance to the storm.

The decision to call back the signal was made when the intrusion of the blockships into the interior of the harbor was recognized. This was around 1:50 p.m. Since all headlights and sirens on "Vindictive" were destroyed, "Daffodil" gave the recall signal with the siren.

The fighting at the pier had been extraordinarily fierce. In places there were bitter hand-to-hand fights with on-board knives and close-range weapons. Among the dead was found torpedo sailor Hermann Künne of "S 53", who had fallen in battle with an English commander; Künne and the English officer had dealt each other the fatal blow with a knife and bayonet. An English officer with 13 men was no longer able to do so to make his way to the "Vindictive". At first they still hoped to be fetched back by motor boats; but after hiding behind a shed for an hour, they had to surrender to the raiding party of the mole battery, now led by Feuerwerker Westphal. Two flamethrowers, two machine guns and other melee weapons were captured in the pier battles.

Shortly after the first landing troops had reached the mole, the English submarine "C 3" succeeded in blowing up the viaduct. "C 3" and "C 1" had been towed by torpedo boat destroyers during the approach. "C 3" was thrown off as planned at around 12:30 a.m., "C 1" had stayed behind during the night due to a line breakage. "C 3" (Lieutenant R. D. Sandford) marched on under its own power and came into sight of the viaduct on the right ahead 1½ nm away. The submarine felt brightly illuminated by flares and thought it was being briefly fired upon by guns west of the jetty. Attempts to camouflage oneself with artificial fog were in vain given the calm that had meanwhile set in and the slightly offshore wind. The viaduct was soon clearly visible about 100 m in front of the submarine. The commander decided, without using the automatic gyro control, to ram the viaduct under his leadership and with the crew remaining on board. Traveling 9½ nm, "C 3" penetrated the iron structure of the viaduct up to the tower. The time fuses were activated and the crew went into the motor dinghy, which had to be rowed due to defective screws. At 1:09 a.m. the dinghy was noticed by the Düne searchlight and lit for a short time, Battery Württemberg took it under fire (1).

¹⁾ It is not confirmed anywhere that shots were fired from the boat and that the headlight's mirror of the Düne headlight was damaged as a result.

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Several people were wounded by numerous hits; the boat had managed to be rowed away about 200 m when the submarine's charge detonated at around 1:20 a.m. The powerful explosion destroyed the iron construction of the mole at the foot of the mole over an area of about 40 m; all telephone lines were cut. Shortly before the detonation, the last report to the divisional commander of the 1st Marine Division, Vice Admiral Schultz, was: "In the north block ship, troops are being landed at the Friedrichsortstand, a steamer is entering the port." Telephone department 291 of the I. Marine-Division, to restore the connection between the pier and the divisional staff by means of field cable construction in about an hour. The English U-boat crew, 2 officers and 4 men, was picked up by the larger motorboat, which arrived just in time and which had been given to the U-boats to accommodate the crew.

Shortly before the viaduct was blown up, Oberleutnant z. S. Fleischer arrived near the air base to round up the air base personnel and stragglers for a push towards "Vindictive". Due to the interruption of the connection with land, Oberleutnant z. S. Fleischer still considered it the most important task as things stood, initially to establish contact with his Flotilla Command and the Marine Division, especially since cruisers were seen entering the harbor and a landing of a larger scale could be concluded. Oberleutnant z. S. Fleischer, together with Oberleutnant z. S. Beckurts, left a boat at the pier and rowed to the Palace Hotel beach, where he reported what was happening on the pier.

At the moment when the viaduct was blown up by "C 3", the pier battery saw the first blocking vessel emerging from the fog. Already at 1 a.m. the "Thetis", which was still completely in the fog and leading the three blockships, was in for about 15 minutes the coastal battery's barrage without suffering any damage. At about 1:20 a.m. "Thetis" (Commander R. C. Sneyd) got the lighthouse and pier head in sight; the ship went to extreme power, put the rudder hard, steered the entrance exactly and signaled its behavior to the following "Intrepid" and "Iphigenia" Shortly before, the motor launch "558" had pulled up to "Thetis" and, as agreed, had given her the exact bearing of the lighthouse. "Thetis" was heavily fired upon by the mole battery; artillery fire was fired, initially at "Thetis" outside the lighthouse. The distance was extremely small, "Thetis" was severely damaged. The man who stepped in as gun commander, Vizefeuerwerker d. R. Gay, scored here was hit in the waterline of the "Thetis", which may have been the cause of the further failure of the "Thetis". Battery Friedrichsort laid a barrier in front of the harbor with shrapnel fire and switched to target fire as soon as a target became recognizable. This was only the case with "Iphigenia". Battery Friedrichsort finally fired at such a small distance that the impacts were on the beach road. 276

Penetration of Blockships

The canal battery mistook the blockships for incoming destroyers and did not fire.

The torpedo boats lying on the inner edge of the pier only took part in the defense with artillery and heavily improvised. No preparation, even if only by the outer boats, to ward off invading vessels by means of low torpedo shots, had taken place, since the discovery of the blocking plans on the English motorboat shot down off Ostend on April 12 had not become known to the half-flotillas and boats. On "S 53" the guards from the machine, under the direction of the senior engineer, Mar. Ob. Ing. Elmering, occupied the middle gun, Obermachinistenmaat Wrede initially entered as No. 1 of the gun until he heard the torpedo rushing in from the shelter -Oberbootsmannsmaat Lichtenberg was replaced. Mar. Ing. Aspirant Güssow had been sent to the mole to report to the commander, who had tried to get a picture of the events on the mole wall; when he was trying to get people out of the dugout Güssow was badly wounded. The commander, Kapitänleutnant Kossak, managed to get back on board unwounded under heavy fire. Due to the confusing situation on the mole, "S 53" was made ready to blow up and sink, just in case.

"Thetis", which returned the fire of the mole battery as best she could, got caught in the net barrier when entering the harbor, tore a gap in it, but had to realize that the German defenses made it impossible to reach her intended destination. After According to the orders, the foremost ship was to advance directly to the lock at the Zeebrugge canal entrance, ram the lock gate and, if possible, sink inside the lock (1). The ship now had to stop the engines about 300 m from the pier head of the eastern entrance pier of the canal, because had a lot of wire netting from the lock wrapped around the screws. The artillery fire caused "Thetis" to list heavily, and large quantities of water poured into the bullet holes on the starboard side.

"Thetis" finally drifted away to port and touched the bottom on the east side of the fairway. In the meantime, the starboard engine was able to move again and the sinking ship turned a little more into the fairway. The explosive charges were ignited and "Thetis" was finally sunk. Motorboat No. 526 took the Thetis crew on board from a cutter, into which parts of the crew had already boarded.

The concentrated fire from the pier battery on "Thetis" in combination with the smoke had brought great relief to the other two ships. "Intrepid" and "Iphigenia" were to cross the fairway, overlapping one another, at the narrowest point of the fairway, approximately at the landing end of the two moles sink at the entrance of the canal.

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Admiral Keyes considered the blocking of this area to be the main goal of the whole operation, because removing the blockships at the flat, heavily barricaded area was considered more difficult than removing obstacles created in the lock or in the canal itself. With a fairway width of 73 m, two blockships of 92 m long placed diagonally against each other should have resulted in a complete blockade. First, "Intrepid" (Lieutenant S. S. Bonham-Carter), after breaking through the barrage of the Friedrichsort battery, untouched by the gunfire, ran into the entrance between the mole heads and advanced to the commanded point. There the ship turned with hard port rudder and Support from the engines so far to port that the commander thought he had placed the ship across the fairway. The explosive charges were detonated and the ship sunk. About 35 m remained free from the bow of the "Intrepid" to the east and about 25 m from the stern to the west up to the embankment for passage. Parts of the crew who had boarded the boats were picked up by motorboat 526, further parts towards sea by "Whirlwind" and motorboat 282. The commander of the "Intrepid" with a few officers and non-commissioned officers were the last to leave the ship in a raft. At the port exit they came under machine gun fire without suffering casualties. The total loss of the crew of 87 was one non-commissioned officer killed by machine gun fire aboard motorboat 282. "Intrepid" had made no attempt to sink inside the lock instead of the "Thetis", which had stayed behind, although after penetrating the lock channel it would no longer have been difficult to advance into the bedding of the lock gate, since the shore batteries could not reach this part of the entrance. In addition, the sluice gate had been opened shortly before when the "Thetis" was approaching by the sluice master, who had mistaken the two-chimney ships for their own destroyers in the dark.

When "Iphigenia" (Lieutenant E. W. Billyard-Leake) rounded the mole head as the last blockship, the commander could see the "Thetis" sitting on the bottom in the port, which was brightly lit by flares, and clearly see the "Intrepid" heading for the canal entrance. "IphigenIa After passing through the barrage of the Friedrichsort battery, it was intermittently fired on by the pier battery, the 3.7 cm anti-aircraft battery and finally also by the Friedrichsort battery, which had switched to aiming fire. Due to the artificial fog, only the superstructure could be seen and the gun commanders had difficulty in making agreements. "Iphigenia" received two hits on the starboard side in the steam line, the ship was heavily enveloped in smoke. A shell from "Iphigenia", which had hit near "S 53" next to the occupied middle gun and the descent to the turbine room, landed Several men from the firing gun crew on "S 53" were out of action, another shell had hit the long shed next to "S 53", heavy smoke drifted over "S 53". While continuing the journey, "Iphigenia" rammed an excavator lying alongside with a barge, separated the two vessels, took the barge with it a bit, but finally got away from it. The commander realized that "Intrepid" was aground on the western part of the canal seated and that there was a gap between the bow of the "Intrepid" and the eastern boundary of the fairway. ²⁷⁸

Closure of the port of Zeebrugge

He decided to close it, collided with "Intrepid" while turning, tried again to maneuver his ship across, but due to the smoke and fog he could not fully assess the situation. When he thought he was touching ground in the eastern part of the fairway, he left he ignited the explosive charges and sank the ship. A good 17 m remained free for passage to the east and west. The crew, who had had a few casualties from machine gun fire, went into a remaining cutter, which was towed by motorboat 282. At the fight of the blockships and motor boats, shore batteries, machine gun positions ashore, the 2nd Flanders Destroyer Half-Flotilla and the 2nd Torpedo Boat Half-Flotilla had been involved.

Between 2:15 a.m. and 3:30 a.m. there were repeated fights against approaching destroyers and motor boats. The torpedo boat destroyers "Warwick", "Phoebe" and "North Star" were in the vicinity of the pier during the events described in order to take action against departing German naval forces if necessary. "North Star" attempted to attack vessels alongside the pier with torpedoes. A torpedo hit the pier head, the detonation killed a non-commissioned officer on the pier; a second torpedo severely damaged the excavator "Hessen" lying on the mole. "North Star" came under heavy fire from the mole battery as it approached; the destroyer was incapacitated in a few moments after hits in the heating and engine room and sank. It was impossible for the slightly damaged "Phoebe" to go alongside in the heavy artillery fire. "Phoebe", which had lost a few personnel, had to turn away after picking up some of the survivors from "North Star". 6 men from "North Star" saved themselves in a boat and moored at Blankenberghe buoy. 5 survivors, including 3 wounded, were picked up the next morning at 8 a.m. by boats of the 2nd Half-Fotilla, which had set out to rescue survivors. At 6:30 a.m. an English motorboat was sighted by the pier battery and battery Württemberg at a distance of 50 to 60 hm, came under fire and was made to sink. Furthermore, two other English small vessels were destroyed.

"Vindictive" with "Iris" and "Daffodil" finally cast off from the pier at around 2:10 am. Except for one officer and 14 men, all the landing troops still alive were taken on board, taking the wounded with them. As soon as the ships had cleared the pier and when they were in open water, they again came under fire from German coastal guns. Here, "Iris" suffered considerable losses: the Commander Gibbs was mortally wounded, half the bridge was torn away, and the ship burned. The main deck was littered with the dying and the wounded.

In the unanimous opinion of Admiral Keyes and the leader of the landing force, "Vindictive", "Iris" and "Daffodil" had successfully carried out their task of diverting the shore batteries from the blockships. However, the foolhardy landing raid on the mole had not achieved its real purpose: the mole battery that was not suppressed could be used successfully against the incoming blockships, military installations on the mole were not destroyed, and the torpedo boats lying alongside the mole were neither sunk nor significantly damaged been prevented from taking part undisturbed in defending against the invading barricades. ²⁷⁹

7. Flanders to May 1918

However, since the torpedo weapon was not ready for combat, this weapon, which was most effective against the blockships, could not be used in good time after the alarm had been raised.

Admiral Keyes had watched the incoming blockships from Warwick, which was not fired upon, from out of the haze and had seen the wrecks of the blockships over the pier's ramparts himself. Apparently the sinking had succeeded in the right place. With severe damage and considerable loss of personnel and material, the formation sent against Zeebrugge began the march back in the knowledge that it had solved the difficult task with full commitment.

The group detached at 11:30 p.m. at buoy 6 for the blocking of Ostend consisted of the two old cruisers "Brilliant" and "Sirius" as blockships, the wheel minesweeper "Lingfield" to accommodate the blockship crews, the two destroyers "Tempest" and "Scepter" as well as 2 P-boats, each with a coastal motor boat in tow for the generation of artificial fog. The calcium buoys laid out under fog protection were destroyed by the fire of the German coastal artillery before they could be of navigational use to the blockships. The fog layer off the coast was initially like this dense that the German coastal defenses noticed little of the enemy's activity. Only occasionally did individual lights appear in the fog, which were fired upon. These were probably the light buoys noticed a number of larger ships approaching the Ostend entrance, some firing themselves to steer. It was "Sirius" and "Brilliant" who tried to find a navigationally flawless approach. Since the wind had almost died down and some of the artificial fog was even blowing seaward against the blockships, navigation was not easy. When the cruisers reached the place where they assumed the Stroombank buoy (howling barrel) to be, they did not sight the buoy, but nevertheless set course for the harbor entrance. By an unfortunate coincidence for the blockships, a motor launch was sighted at this moment about 1 nm east of the howling barrel.

The cruisers decided to close up and now head for the harbor entrance from there. This approach buoy had been shifted to the east by 1 nm on the German side, so that the navigation of the blockships was probably initially problem-free. Under heavy fire from the shore batteries, which soon began, the two ships ran onto the beach just east of the harbor entrance at Bredunine and were blown up. The crews were recovered under German fire with relatively few English casualties. The block attempt against Ostend had failed.

82 officers and 1698 men had been involved in the operation against Zeebrugge and Ostend on block and attack ships. British casualties were 214 dead, including 20 officers, 383 wounded, including 28 officers; captured 1 officer and 18 men, including 5 men from "North Star". 280

Page 265 Failure of the venture towards Ostend

In contrast, the German losses amounted to 10 killed and 16 wounded, namely:

Ostend: 2 men killed, 2 wounded, Zeebrugge mole battery: 2 men killed, 2 wounded, 2nd Destroyer Half-Flotilla: 5 men killed, 11 wounded, 2nd Torpedo Boat Demi-Flotilla: 1 killed, 1 wounded.

Understandably, the operation against Zeebrugge was initially regarded by the English as a complete success. The entrance was closed at low tide, so the Marine Corps ordered U-boats at sea to return via Ostend. This order, given by F.T. and overheard by the enemy, strengthened the British view that Zeebrugge had been successfully blocked. On the German side, too, there was initially a similar impression. The sight of the two blockships lying in the narrow entrance the next morning when Admiral von Schröder was inspecting the mole and locks was understandably not suitable for improving the Commanding Admiral's mood: the enemy seemed to have succeeded in uniting the submarine warfare to deliver a sensitive blow. The actual situation, however, very soon turned out to be quite different. The blockade had failed, the attack bloodily repelled. After a factual examination of the situation and what happened during the night, Admiral von Schröder, correctly recognizing the active defense, expressed his full appreciation of the land and sea forces involved.

After receiving the first reports, the Supreme Army Command could not resist disparaging assessments either, because the coastal defense had not succeeded in shooting down the blockships at sea. General Ludendorff, meanwhile, soon bowed to Admiral von Schroder's unchallengeable statement that artillery means could not unconditionally prevent blockships from penetrating. Neither barrage nor artillery aimed fire can sink ships so quickly that they cannot cover a certain distance. The buoyancy is not immediately dispelled, unless accidental explosions are caused by favorable hits. In this case, the cement protection of the blockships over the vital parts still provided special protection. Depending on the size of the leak and thus also the amount and speed of the penetrating water, sinking a ship can take minutes or even hours. In general, torpedo or mine hits cause more flooding than artillery hits. However, mine barriers had not yet been laid off Zeebrugge and Ostend, so as not to make it more difficult for U-boats to approach, which was already difficult in itself.

A closer examination of the situation very quickly revealed that the conduct of the war from Zeebrugge experienced only slight restrictions, and that only for a short time. Already at noon on April 24, the four A-II boats of the 2nd Torpedo Boat Half-Flotilla Flanders, "A 27", "A 30", "A 43", "A 48" (240 tons water displacement, 2.3 m Draft), at high tide for routine clearing duty at the barrier from the Zeebrugge lock. The blockships were passed in the eastern passage gap without difficulty. ²⁸¹

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The next day, April 25th, around noon at high tide, the 1st Torpedo Boat Half-Flotilla with "A 31", "A 48", "A 58", "A 59", "A 61", "A 60" (375 tons water displacement, 2.2 m draft) also ran to the barrier for routine surveillance and clearing duty without any problems. On the same day, April 25, "UB 16" (127 tons water displacement, 3.0 m draft) passed the Zeebrugge lock and the straits at the blockships, leaving and entering. The same boat then ran the next day, April 26 April, for the long-distance operation again without problems from Zeebrugge. Only the large submarines and destroyers were directed for a short time to enter and leave Ostend. The Ostend-Bruges canal was dammed up accordingly from April 24th.

In a meeting held on May 1st with representatives of the Nordic Salvage Association, which had been consulted, about raising or removing the English blockships in the Zeebrugge lock entrance, after examining the various options, the decision was made to deepen the sunk west and east of the ships by dredging and flushing and to widen the fairway. The blockships themselves remained stranded because lifting the heavy ships seemed difficult at the time and it was not advisable to lay down numerous other vessels at the blocking point due to the danger of planes. Even if the dismantling of the blockships by blasting or cutting them up had also been possible, the danger of deteriorating the remaining fairway with parts blown off could not be dismissed out of hand.

By May 14, the fairway passing west of the stern of the two blockships had been brought back to a water depth of 3.5 m at low tide. This was followed by the complete clearance of the fairway for all submarines and torpedo boat vessels of the Marine Corps. Since the maximum draft of the Marine Corps naval forces was 3.9 m, they could leave Zeebrugge at almost any water level. On April 30, "UC 30" (275 tons displacement, 3.7 m draft) and on May 13 "UC 56" (400 tons displacement, 3.6 m draft) had already left Zeebrugge. After clearance, the destroyers "S 55", "V 71", "V 73" and "S 91" (950 tons water displacement, 3.4 to 3.9 m draft) left Zeebrugge on May 14 without any problems. From that day on, all naval forces of the Marine Corps could enter and leave Bruges again without hindrance via Zeebrugge, after the larger vessels had previously used the Bruges-Ostend and Ostend canal to enter and leave. The freedom of movement of the naval forces of the Marine Corps was therefore never significantly restricted by the blockships, let alone interrupted.

The interruption in the connection between the Zeebrugge pier and land was quickly remedied. A narrow suspension bridge made of pioneer material had already been opened to pedestrian traffic the morning after the attack.

On April 25, the Commanding Admiral of the Marine Corps reported "that the entrance would be fully usable again in the not too distant future for all Flanders forces, unless the unexpected happened.²⁸²

Result of blockade attempt

The submarine warfare did not suffer any limitations or delays as a result of the British attack, so the enemy did not achieve its actual objective". These predictions and statements by the commanding admiral of the marine corps proved to be correct.

The British attack on Zeebrugge and Ostend on the night of April 22-23, 1918 is the model of a large-scale, excellently prepared and boldly executed attempt to eliminate heavily defended enemy bases from the sea by blocking them. The operation was run by a seasoned, experienced and daring admiral who had the confidence of his crews. Officers, special personnel, and men were specially selected, trained to the best of their ability for the special task, and imbued with a fighting spirit. The preparations had been thought through and made down to the smallest detail, and the utmost secrecy was skillfully carried out. Better prerequisites for success can hardly be given to a blocking enterprise.

And yet a failure that confirmed the old lesson of naval history that blocking attacks do not succeed. The fact that the element of surprise was limited only to a small degree by the operational order captured on April 12 played practically no role in attack and defense; the coast was in any case warned and ready to defend itself from the shelling from the sea and from the fog covering the foreshore. The British offensive operation had benefited from the fact that no more far-reaching conclusions were drawn from the early knowledge of the operation order than the rather trivial order of increased readiness for some—and not even the most essential—sections of the coastal defences. Prerequisite for the success of such a difficult project as blocking a well-defended fairway by block ships is the precise and smooth handling of all details. This, however, depends to a large extent on the opponent and on external influences. Thus, the partial failure of the smoke screen in the last stage of the approach up to the docking of the "Vindictive" at the mole, docking at the wrong place, the destruction of landing gear on "Vindictive" and the loss of leading men could not be compensated for by any willingness to attack, however great. These and other deviations from the meticulously worked out and practiced program had to have such a strong impact on the overall success that all the effort was in vain and the goal of blocking was not achieved. Moreover, even if one of the two ports had been completely blocked, Flanders would not have been shut down. The operation would have served its purpose only if both ports — Zeebrugge and Ostend — were closed simultaneously and completely. As things were, the objective went beyond what could reasonably be expected despite the deployment of strong forces and no matter how impetuous the will.

On April 25, 1918, Admiral von Schröder summed up his basic judgment on barricades in a letter to the Chief of the Admiralty as follows: "It proves that ruthlessly launched barricades at night and in fog always have a chance of penetrating close to the entrances to an open coast the historical experiences of sea and coastal warfare.²⁸³

7. Flanders to May 1918

There is no infallible defense against it. The Marine Corps had always expected such attempts. What is astonishing about the incident is that the enemy has only now made such an attempt. The fact that he is now resorting to such an adventurous measure is a sign that the knife is at his throat." The marine corps' assessment of the situation on the same day read: "Once the English have made up their minds under the pressure of the situation, strong forces To deploy fully against the coast, he will continue his attempts to make the Flemish bases unusable for U-boat warfare by undertakings from sea. Apart from increased bombardment and air raids, blockade attempts, especially towards Ostend, will continue to be combined with *coup de force* Landing operations are to be expected. Successful landings on a large scale, which may be of importance for land warfare, are still considered to be impossible."

On May 1, 1918, the Commanding Admiral of the Marine Corps made the following statement about the protection and defense of the coast:

"1. We must be clear about whether we want to continue to use Ostend and Zeebrugge as bases for the offensive operations of our armed forces, especially the U-boats, or whether it is primarily important to protect them against any attempt by the enemy to blockade them protect.

Both goals are mutually exclusive to a certain extent.

It is undoubtedly possible to make the approach routes to the coast so impassable with our own mines and nets, and the entrances even with solid palisades and bulwarks, that penetration by enemy barricades becomes almost impossible.

However, if we want to keep the bases open to some extent for our U-boats, which is undoubtedly necessary, especially for navigating in, which is already extremely difficult for navigational reasons given the always uncertain position of the U-boats, then we are going to use these resources limited. We will then have to accept that the English will continue to push through to the entrances if luck favors them. It will then be particularly important to make available all available funds to ensure that the obstacles that have arisen are removed as soon as possible.

2. Furthermore, one must decide whether it is only important to prevent a large-scale landing, which threatens our flank, or whether it is also important to prevent the English under any circumstances from taking a *coup de grâce* by night and fog put a few hundred men ashore in order to cause some unrest or to achieve press success.

The General Command is of the opinion that, for the reasons already explained, a large-scale landing on the Flanders coast can have no chance of success given the current state of defense, but that coup-type operations, although militarily hopeless, are conceivable at any time. ²⁸⁴

Coastal security issues

If the army deems it necessary to prevent such raids from being possible at all costs, the entire coast would have to be manned by infantry troops without gaps, as would a section of the land front which is accessible to the enemy due to the geographical conditions. It would then have to be used a total of three to four times the previous forces. The General Command has hitherto believed in the general interest that it should be satisfied with the existing occupation."

Measures were taken and initiated to increase security, based on the experience of the blocking attack, to prevent even minor successes by the enemy if, as expected, he again proceeded directly against the Zeebrugge and Ostend bases. About 24 guns of various calibers (17 cm, 15 cm, etc.) were extracted from the land front of the Marine Corps and the artillery depot and distributed along the coast. To strengthen the mole defense, four 15 cm SK L/40 were requested by the Imperial Naval Office for delivery as soon as possible. The erection of heavy mine launchers on the Zeebrugge mole head and the tail unit at the entrance to Ostend was ordered, and the number and size of searchlights increased. The mole was divided into different defensive sections by Spanish horsemen. Communications have been improved. The installation of underwater noise receivers for Zeebrugge and Ostend as well as the laying of a ship signaling cable off the coast has been initiated. The patrol service at sea has been tightened. Boats from the Flanders Minesweeper Flotilla and the 1st Mine Sweeping Division generally patrolled at night off Zeebrugge and Ostend, unless this was ruled out by lack of sight and rough seas. In order to always have a troop trained for the infantry defense of the pier at hand, a company of sailors from the regiment intended for pier security was placed on the pier itself and the entire pier defense was placed under a single command.

The question of protecting the port entrances directly with their own mine barriers was now raised again. Apart from the disruption to the departure and arrival of their own submarines, it was doubtful whether a mine barrier could remain in place for a longer period of time despite the heavy ground sea on the outer edge of the Zeebrugge mole. On May 9, after a thorough examination, the prospect of strengthening the Zeebrugge harbor barrier with regular mines was considered and the necessary personnel and material was requested from the Admiralty. Due to the technical difficulties and the fact that the entrance there was directly under fire from the shore batteries, a similar barricade was not laid before Ostend. A torpedo battery was requested for Zeebrugge, but there was no suitable place for it in Ostend. In order to provide immediate relief, it was ordered that on all nights when a blocking attack was possible due to the weather and high tide times, a destroyer with her torpedo tubes swung out and ready to fire should be ready for immediate action on the outer mole of Zeebrugge. It was clearly recognized that only mines or torpedoes offered a guarantee of sinking blockships before they entered the lock canal. ²⁸⁵

7th Flanders to May 1918

Since it was initially believed in England after the blocking raid that there were serious obstacles to the departure of German Naval Forces from Zeebrugge for the time being, strong air raids were carried out on Zeebrugge immediately after April 23 to damage the naval forces who were forcibly held in the port, as far as the weather condition any permitted. In addition, the enemy developed a very strong reconnaissance activity in order to get a precise picture of the result achieved. On April 23, Ostend, Zeebrugger Mole and Schleuse as well as Rombacher Hütte were bombed in numerous strong attacks in the afternoon and during the night. No military damage was done anywhere. On April 25th there was lively enemy air activity all day long at sea and along the coast. Several bombings took place at Zeebrugge Mole and at Wenduyne. On April 27th, in the course of the afternoon, covered by clouds, enemy land planes attacked Ostend, den Haan, Dudzele and Nieumünster airfield from a low altitude with bombs and machine guns, the damage was insignificant. When pursuing these aircraft, Flugmeister Buhl from the Seefrontstaffel crashed a Sopwith 3 to 5 nm abeam of Middelkerke.

In between, unfavorable weather prohibited attack flights. On May 1st, some bombs were dropped on the coast at Wenduyne and Middelkerke without causing damage.

At around 2 p.m. on May 2nd, 6 aircraft (de Havilland) attacked the Mole Zeebrugge, but after a short skirmish they were pushed aside on the first attempt and pursued to Nieuport without result. There was lively enemy bombing activity along the coast. 5 to 6 other planes (Sopwith) attacked the Zeebrugge mole. Five bombs fell without causing damage, one plane was forced to land by anti-aircraft fire and the occupant, a British pilot, was captured. Two hours later, 15 to 20 bombs were dropped in the vicinity of the Friedrichsort battery without causing any damage.

On May 3, the Zeebrugge lock and pier as well as minesweepers were repeatedly attacked by enemy planes. No damage was done anywhere. The aircraft of the Seefrontstaffel and seaplanes standing ready to defend themselves had several air battles with the enemy bombers, which were unsuccessful despite dogged pursuit. Around 1 p.m. on the same day, the Bruges shipyard was hit by 7 de Havillands from a height of 4500 m with a total of 25 small bombs. Only 6 bombs fell within the shipyard area, the damage was minor. For the first time since the blocking raid, monitors also fired at the coast between Westende and Middelkerke between 3:20 p.m. and 4:00 p.m. that day. The Tirpitz and Prussian batteries returned fire against the fogged monitors. The security guard had been observed several times in the previous period. The next day, between 9 and 10 p.m., battery Tirpitz was shelled from the sea without further details being ascertained. Engine noises off the coast around midnight and foggy motor boats recognizable in the glow of flares fired off, as well as some shooting down at sea, led to the coast being alerted temporarily. ²⁸⁶

British air raids on Zeebrugge

At 3:25 p.m. on May 6, 7 enemy single-seaters, coming down from the clouds to a depth of 400 m, attacked Seeflugstation II with bombs. Two direct hits destroyed 5 aircraft in the hangars, including all 4 H.F.T. machines at the station.

On May 8th offshore flight operations were very heavy. At noon and in the evening bomb squadrons attacked the mole and Zeebrugge. A bomb broke through the roof of a submarine shelter without damaging the submarine below. No military damage was done. A hit went into the Zeebrugge church.

On May 9 there was also very active enemy bombing activity. Mole Ostend was attacked around 8 o'clock, Zeebrugge in the afternoon, damage and casualties were insignificant.

Events in the naval air war from April 23 to the end of May 1918

- 23 April: Three enemy planes shot down over sea by fighter planes.
- 25 April: Between 5 p.m. and 7:15 p.m., a C squadron from Seeflugstation I reconnoitered the Zeebrugge, North Hinoer, and Outer Gabbard area. About 15 nm east of Outer Gabbard, two Curtis boats coming from the SW are attacked. In pursuit, the lead aircraft (Oberleutnant d. R. Christiansen, Vizeflugmeister Wladika) comes within 10 m of the enemy and causes a flying boat to crash on fire. Because of the swell, it is not possible to pick-up the occupants who are clinging to the wreckage.
- 1 May: A C-squadron from Seeflugstation I reconnoitered the Zeebrugge-Nordhinder area from 5:00 p.m. to 8:15 p.m. At 6 p.m. in the Nordländer area, the Dutch iron sailing ship "Albertina", 100 to 120 tons in size, was stopped and, after the five-strong crew disembarked, was extensively shot at with machine guns. The sailing ship came out of sight sinking.
- 2 May: The Brandenburg C squadron, which was temporarily made available to the High Seas Fleet, arrives in Ostend from Borkum.
- 3 May: When returning from a reconnaissance flight to the Maas Boje, aircraft "705" (Flugmaat d. R. Geyger, Flugmaat d. R. Iany) has to make an emergency landing in front of the Estuary of the Scheldt Support him while the third plane flies back to report. The crash-landed planes drift into Dutch territory and are towed by a Dutch guard steamer. The crew is interned in Holland.
- 4 May: At 7:10 p.m. between Ostend and Rurtingen, three sea front single-seaters under the command of Lieutenant Spies attack an enemy squadron of six Sopwith sea combat single-seaters. During the course of the battle, four enemy planes are shot down or forced to land. German seaplanes rescue two seriously wounded airmen from two smashed machines.
- May 5th: During a reconnaissance flight up to the channel closure, aircraft "1695" (Vizeflugmeister d. R. Könekamp, Vizeflugmeister d. R. Schauer) has to make an emergency landing at Westhinder at around 10 a.m. Vizeflugmeister d. R. Schauer is taken prisoner. Könekamp is missed. ²⁸⁷

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May 9: Plane "2014" is fired upon by Dutchmen on a long-distance flight Borkum—Zeebrugge near Scheveningen, drifts off to sea, lands and continues the flight after a better view arrives. Lieutenant z. S. Lodemann brings down an enemy Sopwith at 7 p.m.

In the days after May 10, the air raids on the Flemish bases, partly intensified by shelling from sea and land, reached an unprecedented strength. In the afternoon of May 11th several bombs were dropped on Zeebrugge. At about 6 p.m. on the same day, the Bruges shipyard was attacked by two enemy planes and about 20 bombs were dropped. The impacts were west of the shipyard outside the shipyard area and near the sea station. There was no property damage.

On May 13, between 1:45 and 2:55, large English aircraft attacked the Bruges shipyard and artillery depot with about 40 bombs, illuminating the area with parachute rockets. Three hits in the submarine artillery workshop caused a fire that was extinguished after an hour's work. Operations were not disrupted, although there was some material damage due to the extraordinary penetrating power of the bombs.

On May 15, between 12:10 a.m. and 1 a.m., five large enemy aircraft again attacked the Bruges shipyard and artillery depot. All aircraft were repelled by searchlights and anti-aircraft fire. 30 to 36 bombs fell in the city and the surrounding area, the damage to houses was considerable, including some valuable buildings. During the course of the afternoon, Zeebrugge, Heyst, Nieumünster and den Haan were repeatedly bombed and property damage of no military significance was caused.

On May 16, from 12:00 a.m. to 1:00 a.m. and from 3:00 a.m. to 3:50 a.m., there were six bomb attacks by a total of seven large enemy aircraft on the Bruges shipyard and the surrounding area. The approach was from the northeast and east. About 40 bombs were dropped. A hit on the "UB 59", which was lying in the pontoon anyway because of a mine hit and which was being repaired for several months, ignited an oil tank. The fire was extinguished after an hour's work. A machine building and two railway carriages were also damaged. An enemy large aircraft was shot down by anti-aircraft battery Andries by target fire. Three occupants, including a staff officer and a lieutenant from the English Navy, were killed and another jumped from 600 m (2,000 ft) and was captured unharmed.

During the day, Zeebrugge, Batterie Friedrichsort and the hinterland were bombed several times. From the sea, two monitors shelled Ostend several times a day without causing any military damage, while several houses were destroyed and Belgian residents killed and injured, as in the frequent air raids. In retaliation, La Panne was hit with heavy flat fire. Torpedo boats, which searched the bombardment position in the evening, found that the Middelkerke Bank barrel had been set on fire by the enemy; and they shot it down together with a position buoy.

On May 17, the western battery area was shelled with 25 rounds from land. 288

Page 273 Continuation of the air raids on the Bruges shipyard

During the night of May 17th and 18th, about six large English aircraft attacked the Bruges shipyard. Only one aircraft managed to drop the bombs over the shipyard, despite balloon protection, barrage and target fire. Two heavy bombs severely damaged the mechanic's workshop and torpedo machine turning shop, a fire caused by a short circuit was extinguished after an hour. "S 53" was severely damaged by detonation pressure and explosives.

The boat was held by underhand. These violent attacks, which began in any suitable weather situation, indicated that the enemy was now making every effort to destroy the Bruges shipyard by night air raids. The damage, which was increasing every day, was extremely disruptive, so that the commanding admiral considered it necessary to strengthen the artillery defenses. All of the Marine Corps artillery available on land and shore had been deployed, with no other resources available. In response to the application made on May 17, the Admiralty approved part of the demands for the protection of the Bruges shipyard and the Zeebrugge and Ostend locks on June 2, and provided anti-aircraft batteries from the funds available to the Navy.

After midnight on May 19, seven large English aircraft attacked Zeebrugge. The enemy was pushed back by our barrage, so no damage was done. One aircraft, of which two occupants were captured killed and one wounded, was shot down by anti-aircraft fire. Zeebrugge was bombed again that day, as were Heyst, Wenduyne and the Uitkerke airfield.

On May 20th, 21st, 22nd, 25th and 27th Zeebrugge, Bruges shipyard and other places and torpedo boats at sea were attacked without serious damage.

Ostend was fired on by monitors on May 21, the approach of a remote control boat intended against the monitors was not carried out because the F.T. device became unclear. A remote control boat operation that had been launched on May 28th against the security guard had to be broken off due to decreasing visibility.

On May 21st, two enemy planes were caught abeam Ostend by Lieutenant z. S. Lodemann and Lieutenant z. S. Sachsenberg crashed.

On May 27th, while pursuing an enemy bomb squadron, Lieutenant Schulze of I. Jagdstaffel shot down an enemy.

On May 28, the continued air raids finally had the success the enemy was aiming for. During the night of the 27th for the 28th time, heavy air raids on the Bruges shipyard and city as well as Zeebrugge, several planes gliding low down on the Zeebrugge lock and damaged the inner gate of the lock with a bomb about 16 m north of it fell into the sluice basin. The lock gate filled with water and could no longer be moved. One plane was shot down by machine gun fire. On June 4th they managed to take out the lock gate; it was docked, the reserve gate deployed and scuttled in the evening. 289

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Reserve gate used and sunk in the evening. At 11 p.m. on June 4, the lock was reported clear again.

On June 9, monitors from the security guards damaged the outer lock gate with a direct hit during a shelling between 2:10 p.m. and 2:30 p.m. The bombardment was carried out with 40 to 50 shots of the heaviest caliber under air surveillance. The installations were fogged and the enemy, who could not be seen because of the hazy weather, was engaged by the shore batteries using sound measurement methods. The damage to the lock gate forced the gate to be replaced. The lock could only be reported operational again on July 1st. On June 8th the work on the viaduct had progressed so far that the connection to the mole was restored by a wooden bridge. On the mole itself the torpedo battery with two ready-to-fire torpedoes was completed on this day and the C/A which had begun on May 25th -Mine barrage (inner row) brought up to commanded mine level.

While the Zeebrugge lock was unclear, the naval forces were routed via Ostend. According to a final report by the Bruges flak group commander, from October 1, 1917 to March 30, 1918, a total of 72 attacks by 349 airmen with 1,947 bombs were carried out on the Bruges shipyard and artillery depot; in the previous half-year there were 40 attacks by 202 airmen with 1,107 bombs amount. Over time, daytime attacks had increased by 100%, night attacks by 77%. The hit percentage had dropped from 6% to 5.1% in the last six months, according to the commander, thanks to the experienced searchlight personnel, who caught 50% of the airmen on moonless nights and numerous airmen on moonlit nights and held them for a long time.

Events in the naval war from April 23 to the end of May 1918

- 24 April: First patrol by the Flanders Torpedo Boat Flotilla after the barricade on Route B reveals no mines. Destroyer cover by 2nd Ddestroyer Half-Fflotilla, which had set sail via Ostend.
- 25 April: 1st Torpedo Boat Half-Flotilla clears 2500 m of net with 19 mines: destroyer protection by 1st Destroyer Half-Flotilla.
- May 3rd: The steamer "Magdalena Fischer" passes the Zeebrugge lock entrance while sailing. The chimneys and ventilators of the English barricade cruisers lying off Ostend have been blasted off. The ships now hardly stand out from the dunes and can no longer be used as navigation points.
- May 4: "UC 17" is the first large U-boat to enter Zeebrugge.
- May 5: Torpedo Boat Flotilla clears 400 m of net without mines. The nets are very deep and difficult to grasp. Destroyer protection by 2nd Destroyer Half-Flotilla.
- May 6: Torpedo Boat Flotilla removed 4000 m of net with 54 mines: destroyer protection by 2nd Destroyer Half-Flotilla.
- 7 May: 1st Torpedo Boat Half-Flotilla clears 400 m of net with 7 mines. Work had to be stopped due to the coming sea. Destroyer protection by 2nd Destroyer Half-Flotilla.²⁹⁰

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Coastal security in Flanders

- May 8: While working on the mole gap, the steamer "Wettern" runs on a piece of wreckage and sinks. "V 71", "V 73", "S 55" and "G 91" of the III. Torpedo Boat Flotilla have to give up the intended crossing to Flanders because of unfavorable weather conditions. The four boats meet on 12 a.m. in Flanders.
- 9 May: 1st Torpedo Boat Flotilla opens artillery battle against net clearing enemy destroyer. Net clearing had to be broken off because of the shelling from monitors that started immediately afterwards. Destroyer security by boat of the III. Torpedo Boat Flotilla.

The night from May 9th to 10th was very dark, wind WNW, force 3, slightly overcast sea, initially blue, later overcast sky and fog. The day before the wind had been brisk, blowing from the north-east at force between 4 and 6. The high tide expected at 1:30 a.m. on May 10 and the weather situation on the evening of May 9 called for special attention that night, and enemy barricades were likely. As a result of the stricter regulations for guarding the coast after April 23, two boats of the 1st Mine Sweeping Division patrolled off Zeebrugge and two A-boats of the minesweeping half-flotilla off Ostend. The security order issued by the 1st Mine Sweeping Division for the night of May 9-10 read as follows:

"Coastal security for the night of 9/10 May

- 1. Own forces at sea. Arrival around 1 a.m. (It was about the scheduled trips of the Destroyer Flotilla and Torpedo Boat Flotilla Flanders).
- 2. After the two A-III boats had arrived in Ostend, two boats from the minesweeping half-flotilla patrolled off Ostend until 5 am.
- 3. After the Destroyers and the Torpedo Boat Flotilla had arrived in Zeebrugge, two boats of the 1st mine clearance division patrolled off Blankenberghe until 5 a.m.
- 4. From 5:00 a.m. reconnaissance advances by two destroyers."

The following order was also issued:

"Tonight the sea area will be searched with searchlights and flares.

Flare grenades fire:

Hamburg battery: 12:05 a.m., Harbor battery: 12:35 a.m.,

Mole Battery: 1:10 am, 1:30 am, 2:00 am, 3:20 am.

It shines with headlights:

Pier battery: 11:55 p.m., 2:35 a.m., 3:50 a.m.,

Port battery: 2:40 a.m.,

Hamburg battery: 3:05 a.m..²⁹¹"

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7. Flanders to May 1918

The two boats "A 8" and "A 11" located at outposts off Ostend saw light signals in NNW at 2:30 a.m., apparently Morse code, immediately afterwards the muzzle flash of heavy artillery guns in NW in sight and in a gap in the fog to the north a larger ship with three funnels and some torpedo boats at a distance of about 5 nm from the coast. The sighted ship, which was on a westerly course, was just about to turn to port at that moment. Immediately, at 2:40 a.m., the coast was alerted by the firing of an axis baton signal rocket.

At around 2:45 a.m., several heavy caliber guns were heard being fired from the sea at about the same time the boats of the minesweeping half-flotilla were alerting the coast. Heavy fire also started on Ostend from land. The batteries to the east and predominantly to the west of Ostend were fired upon extensively by the enemy without any significant damage or casualties occurring. Airplanes attacked Ostend and Zeebrugge at about the same time, dropping flares over the city and port of Ostend.

The shelling from the sea was carried out by the monitors "Prince Eugene", "Sir John Moore", "Erebus" and "Terror" as a prelude to an attempt to blockade Ostend. The decision to undertake this was made immediately after April 23, as soon as the failure before Ostend was recognized. Admiral Keyes reported to the Admiralty his intention to carry out the failed blocking of Ostend during the current flood period, i.e. in the four days following April 23rd. In order to achieve this in a short time, the severely damaged "Vindictive" was quickly converted into a block ship. She was brought to the correct draft, part of her cells were filled with stones and cement. However, the weather conditions were not favorable, the operation had to be postponed to the next favorable period. It was necessary that the block ship enter the harbor at high tide, the armed forces approached as far as possible in the dark and the danger zone of the shore batteries was left before daylight. The operation was expedient by to be carried out from Dunkirk; the sea route was short and covered in about 2½ hours. The next possibility was the period between May 9th and 14th, in which full darkness was to be expected at about 10:30 p.m.; it started around 3 a.m. The latest high tide hour that could be considered was therefore about 2 am. In this case there was definitely enough darkness for the approach and just enough for the departure. The postponement made it possible to prepare another blockship, the cruiser "Sappho". Commodore Lynes was commissioned to lead the blocking; similar preparations had been made for bombardment, smokescreen and security as for April 22nd/23rd.

In addition to the four monitors mentioned, the monitors "M 23", "M 25" and "M 27" took part, they were anchored as navigational points for carrying out the bombardment. 18 English and French destroyer command ships and destroyers were also provided to secure the operation, also 4 French destroyers and 4 French motor boats to mark the approach, also 22 motor launches, 5 large coasters and 3 of his motor boats (C.M.B.). ²⁹²

New blockade attempt of Ostend

Two coasters were hired for the direct escort of the "Vindictive". Admiral Keyes accompanied the company on "Warwick", Commodore Lynes carried out from "Faulknor". three patrol lines were set up to deal with any German destroyers breaking out of Zeebrugge. The possible presence of a German destroyer flotilla in Zeebrugge made this precautionary measure seem correct, despite the assumed blocking of Zeebrugge.

On the first day of the projected flood period, May 9th, the weather was favourable. Admiral Keyes commanded the operation for the next night and himself took command of the destroyers provided for cover. Shortly before "Vindictive" and "Sappho" left Dunkirk Roadstead, air reconnaissance received the report, which was confirmed again shortly afterwards, that the buoys near Ostend were no longer in their normal places. As a result, it became imperative to support the company by laying out English light buoys. Soon after leaving the roadstead, "Sappho" had an engine trouble, which reduced the cruiser's speed to 6 m and made her further participation impossible. The blocking was now the sole responsibility of the "Vindictive".

The time for the beginning of the bombardment was based on experience on 22/23. Reserved for April so as not to alert the coast ahead of time. As flares were observed at fairly regular intervals as the coast was approached, and around 2:45 a.m. gave the impression that the coast must have been alerted, the ordered shelling began. All formations were on station at about 2:30 a.m., so that when the order was given to fire on "Prince Eugene" and "Sir John Moore" from the west deep, fire was directed at the batteries Cecilie, Beseler, Antwerp and Aachen, "Erebus" and "Terror" opened from the anchorage north of Wenduyne Bank to the Deutschland, Tirpitz and Hindenburg Batteries. The heavy shore batteries returned fire as far as the muzzle flashes of the monitors could allow.

"A 8" and "A 11", which had spotted a ship with three chimneys, probably the "Vindictive", sailed east so as not to get caught in their own barrage. The use of the relatively strong torpedo armament (each 2 43 cm. tube) of these two boats could have nipped the attempt at blocking in the bud, especially since the surrounding smoke screens strongly favored an unnoticed attack. In any case, the boats had not been seen from the "Vindictive". The favorable coincidence was not exploited. A few minutes after running off, at 2:50 a.m., "A 8" was rammed by "A 11" starboard aft near the turret. Section II was full of water, the rudder line was broken. "A 8" was rudderless, the bulkheads were tight. "A 11" came out of sight. At 3:10 a.m. "A 8" sighted an English speedboat through a gap in the fog. "A 8" and the English motorboat No. 22 got into a brief skirmish; the speedboat fired with MG "A 8" with MG. and its 5.2 cm. The opponents quickly lost sight of in the fog. ²⁹³

7. Flanders to May 1918

Motorboat No. 22 had been commissioned with No. 5 to designate the wrecks of "Brilliant" and "Sirius" (1).

At 3:40 a.m. "A 8" touched ground slightly, soon freed itself again and steered using handspikes and tackles until at 4 a.m. "A 11" was again at "A 8" and took it in tow. Except for a short shelling a German shore battery when entering, the two boats have had no more special experiences.

In the meantime, the English small boats laid out auxiliary sea marks as ordered and continued to carry out the smokescreen. The fog was very thick, and the unnoticed approach of the blockship seemed assured. The motor boats now advanced against the pier heads and the harbor under cover of the fog. Several torpedoes were fired at the mole heads without any noticeable effects from the German side now or later. Due to shallow water, a motorboat had a bottom gage that detonated near the motorboat and severely damaged the boat; it just managed to salvage the boat while being towed. As far as the motor boats were recognizable and lights flashed, the shore batteries took aim at them. The attacking motor boats were at times under heavy shell and machine gun fire. Attempts were made to illuminate the battlefield from the coast using flare belts and individual flare grenades. The artificial fog, meanwhile, was extraordinarily thick and was intensified by natural fog arising at the same time. Searchlights and flares were greatly reduced in their effectiveness. At about 3:05 a.m., larger ships were sighted in front of the entrance, the information on their number and behavior differed. But it can only have been "Vindictive", which had meanwhile reached the harbor entrance. "Vindictive" (Commander Godsal) had headed for the coast near Ostend in haze and fog. When the commander thought he was standing directly in front of the entrance and saw nothing, he set a westerly course; "Vindictive" stood close to the entrance. The cruiser steered west along the coast for a while and then turned back. When she thought she had passed the harbor entrance again on the new course, she turned west again and gave the accompanying coaster No. 23 the order to fire a rocket. In the light of this the heads of the mole loomed close to port. "Vindictive" now turned towards the entrance and from then on lay under heavy fire from the German shore batteries. The reinforcements made to defend the harbor entrances now had an opportunity to prove themselves. The 15 cm sluice Battery and the gun mounted on a scow had an excellent firing range. The newly formed mole battalion with machine guns also took part in the defence and boat guns.

¹⁾ Admiral Keyes reports in "The Naval Memoirs", II, p. 331, about the combat contact of Coaster No. 22 under Lieutenant Wellman with a German torpedo boat, which lit up a searchlight and opened fire. It is reported that the coaster attacked with such good success that it "swept off" the torpedo boat and consequently made room for the approach of the "Vindictive". Here is an example of the typically subjective perception of a night situation. ²⁹⁴

"Vindictive" in Ostend

The German artillery fire caused severe personnel losses on "Vindictive". The commander, who initially led from of the command post when sighting the entrance, had left the command post at the level of the entrance because the command routes were disrupted. He fell instantly; the navigating officer and numerous battle posts were severely wounded. The Command passed to Lieutenant Cruthley. The cruiser had been quite far to the east in the fairway when it came in, and the current had pushed it close to the east mole when it was being steered. Shortly before the commander died, he had given the order to port rudder, fearing that he would no longer be able to shear the cruiser off the east pier with the starboard rudder. Lieutenant Cruthier, attempted to support the initiated turn to port by backing the port engine with utmost force. The effect in the shallow water was little, the current pushed the ship against the mole, where it was stuck at an angle of about 25° to the pier. It was possible to detonate part of the explosive device and abandon ship with the rest of the crew. The salvage work of the motor barges proceeded under heavy fire from the coast with great difficulty; numerous losses occurred on the boats Nos. 254 and 276, which were boldly commanded. The crew of the severely damaged motor launch No. 254, which was about to sink, was later picked up by "Warwick" with some of the rescued.

Of the 5 officers and 48 men crew of the "Vindictive", 2 officers and 8 men were killed, 2 officers and 10 men were wounded, 3 fell into German hands captured. The German losses amounted to 3 dead, one man each from the battery Aachen, the Searchlight east pier and the scow gun, also 4 seriously and 4 lightly wounded. One gun of the 15 cm sluice battery and the searchlight east pier suffered temporary damage.

"Vindictive" lay outside the fairway. The underwater part of the ship was badly damaged and quite full of water. It was again confirmed that artillery fire could not cause a ship to sink during the short time it was passing through barrage and aiming fire.

Vice-Admiral Keyes assumed at about 3:30 a.m., when the gunfire subsided, that the operation inside the mole had ended as planned. He waited another quarter of an hour with the destroyer formation and then set off on a westerly course parallel to the coast. He believed that he had adequately covered the small warfare resources involved in the blocking, which had meanwhile run out again, against destroyers that had left Zeebrugge. Half an hour later "Warwick" came across motor launch No. 254; after the last man was on "Warwick" it was dusk. The destroyer, which was within range of the German shore batteries, was sufficiently covered by the existing haze and fog. At 5 a.m., when approaching the barrier, "Warwick" encountered a mine that severely damaged the stern. After initial doubts as to whether it would be possible to bring it in, "Warwick" was towed by "Whirlwind"; "Veloi" secured by walking alongside. Staying within range of the coastal guns was not without its dangers, but poor visibility hid the tow from German sight. 295

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By 8 a.m. the towed convoy was outside the endangered zone, at which point Admiral Keyes decided to use the F.T. and summoning assistance. At 5:30 p.m. the "Warwick" arrived in Dover as the last vehicle of the operation.

The message, released the next morning by the English side, read: "The operation to close Ostend and Zeebrugge was successfully carried out last night by sinking cruiser Vindictive between the moles and across the entrance to the port of Ostend." This announcement was not factual. The operation, carried out with great courage on the night of May 9th, was completely unsuccessful. The location of the "Vindictive" in no way interfered with the use of Ostend.

Since Admiral Keyes subsequently had no doubt that the intended blocking of Ostend had not succeeded, on May 20, 1918 he applied for a third attempt to block Ostend with blockships. He asked again for "Sappho" and also for the old liner "Swiftsure" to be made available, assuming that the next block attempt would encounter a mine barrier off Ostend. Despite the approval of the Admiralty, this third undertaking was not carried out for reasons that have not become known.

Although the operation on the night of May 9th and 10th led to the unqualified conclusion that the blockade attempt against Ostend had failed thanks to the excellent defensive readiness of the Flanders coast, the protection of the coast by our own minefields was accelerated. The decision taken immediately before May 9 to refrain from mining near Ostend was dropped on the fourteenth time. Orders were given to block the entrance to Ostend as soon as possible with a double row of 82 C/A mines (200 kg) at a distance of 600 m in front of it, thereby also blocking traffic for our own naval forces, which were dependent on the use of a vulnerability, to make it very difficult. Without being a sure protection, the barricade was likely to increase the difficulty of bringing barricade ships into the entrance. The disadvantages of the narrowing of Ostend could be accepted in the current situation. A reopening by clearing the barrier was given at any time. As long as the mine barrier was in place, an outpost service was carried out in front of Ostend. The mines were destroyed on May 15 by four boats of the III. Torpedo Boat Flotilla ("V 81", "V 73", "V 70" and "S 53"), supported by "A 43" and two boats of the 1st Mine Clearance Division, under the command of the Flotilla Commander of the Torpedo Boat Flotilla Flanders, Kapitänleutnant Aßmann, laid according to plan.

Since the arrival of the regular mines for Zeebrugge was delayed, the Commanding Admiral of the Marine Corps ordered the immediate deployment of a C/A mine barricade of 40 mines in a double row in front of Zeebrugge on the 25th time. The barrier was to be provisionally laid out just to the west of the barge and hawser barrier. For this purpose, the barrage was relocated so far south that a barrier gap of about 150 m remained just below the pier. The approach for own vessels remained safe, for the enemy it was more difficult to break through with larger ships into the lock entrance. "S 63" (Kapitänleutnant Loeffler, W.) and "V 74" (Kapitänleutnant Junghans) with 20 mines each were designated as minelayers.

The War at Sea 1914-1918; "The North Sea", Volume VII

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The Barrier before Ostend 2

Mine-laying began at 5:30 p.m., two hours before low tide. Shortly before the fourth mine fell on "V 74", the stern of "V 74" a strong mine detonation. The boat sank astern, first lying on the stern and at the next low tide completely on the ground. Section I was torn away, 1 officer, 2 deck officers and 8 men were killed, 9 men were wounded. The operation was broken off, as far as the destroyers were concerned, and the outer barrier row of 20 mines was laid out by minesweeper boats on the same day. From the inner row, only three mines each were laid by "V 74" and "S 63".

The lifting work was difficult. It was not until July 17th that "V 74" was towed onto shallow water in order to start sealing work there. 297

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8. The Naval War from the German Bay (May 1, 1918 to August 1918)

In the first months of 1918, the mine warfare against the German entry and exit routes in the North Sea meant that the majority of the U-boats leaving the port in February and March made their way through the Baltic Sea. In April the number of Uboats going through the North Sea and the Baltic was almost the same. In the case of incoming U-boats, the picture had even shifted to the point that from March 1918 onwards only the Baltic Sea routes were used (1). In this situation came the report on May 1, 1918 that Danish fishermen had found groups of mines about 5 m deep in the Kattegat near Herthas Flach and 5 nm southwest of Vanguards Grund. On the same day, the Swedish authorities announced that the areas mentioned were endangered by mines with a depth of 5 to 6 m. The U-boats on the march were therefore ordered to stay within Danish territorial waters if possible. Incoming U-boats were guided across the sound and received detailed commands for approach. Over the next few days, reports of mine contamination in the Kattegat increased. The fleet chief ordered the VI. Torpedo Boat Flotilla (Korvettenkapitän von Tyszka), to explore the actual presence of mines, nets and passage gaps inconspicuously and without precisely determining the extent of the barriers. On the 9 May, the VI. Torpedo Boat Flotilla by slipping equipment in mines at 57° 29.5' N, 11° 20' E and observed the detonation of a large number of mines in the immediate vicinity.

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As a protective barrier against further penetration of minelayers into the Skagerrak, it was ordered that the line Skagen-Paternoster with 400 mines be blocked by three single-row partial barriers. The task was carried out on May 11 by "Bremse" (Fregattenkapitän Westerkamp). Further barriers were laid east and west of the Bremse barrier by "Bremse" on May 14 under the leadership of the leader of the IV Reconnaissance Group (Kommodore von Karpf) and "Strassburg" (Frigattenkapitän Reichardt) with a total of 540 mines thrown. The English Kattegat barriers were thrown on February 11 and in the night of April 15-16, in two barrier groups. The first group (656 mines) at Herthas Flach was laid by "Princess Margaret" with 400 mines, by "Boadicea", "Penelope", "Abdiel" and "Aurora" with 64 mines each, i.e. 256 mines. The mines had no timer and were set at 10.6 and 19.8m below the surface. The other group at Vanguard's Bottom was laid at 10.6m depth by "Princess Margaret" and "Angora" with a total of 721 mines without a timer. While barricades were harmless to surface vessels, they endangered the fisheries that eventually discovered the barrages. The mines were aimed at submerged U-boats, which were intended to be pushed under water by British submarines waiting at the barrages. The chances of success were very slim.

On May 1st the British Government made it public knowledge that from May 15th a specified area of sea between the Orkney Islands and the Norwegian coast was endangered for shipping. The boundary points of this warning area were given as follows:

- 1. 59° 12½' N and 4° 49' E,
- 2. 59° 29' N and 3° 10' E,
- 3. $58^{\circ} 25'N$ and $0^{\circ}50'W$,
- 4. 59° 20' N and 0° 50' W,
- 5. 60° 21' N and 3°10' E,
- 6. 60° 0' N and 4° 56' E,

further along the western boundary of Norwegian territorial waters back to point 1.

The announcement by the English Admiralty of May 1, 1918 was the first sign of large-scale mine closures in the north end of the North Sea. At first it was not clear to what extent the announced sea area was in fact endangered. The English announcement, however, was to be taken seriously, at least for the future; it was the beginning, made in March 1918, of the largest mine design ever attempted; this later became known as the "Northern Barrage" and had as its aim the complete blocking off of the wide passage between Norway and the Orkney Islands for U-boats.²⁹⁹

Page 283 New outlet routes: 200 and 300

The idea for this had emanated from the United States Admiralty when they entered the war in April 1917. A turnaround in the war situation, which the Allies assessed very pessimistically at that time, was only expected if strong American army units were sent to the European theater of war, measures which, as was assumed, given the unprepared state of the USA, would only take place over the course of at least a year in action could be implemented. It was therefore the serious concern of the American Admiralty to do everything possible to reduce the U-boat danger, which threatened to jeopardize the passage of future mass transports of American troops in the strongest possible way. As early as April 15, 1917, a memorandum by the mines section of the United States Navy Office of Ordnance (Bureau of ordnance) raised the idea of closing off the straits between Norway and England with mines.. A year later, in March 1918, the first sections of mines acting against surface ships were laid. The further expansion of the Northern Barrage over the next few months took place within the warning area that became known on May 1, 1918.

The main concern of German mine countermeasures continued to be the maintenance of mine-free exit and entry routes into the German Bight. In May, initially only Route 300 between Middle Path and Blue Path was available as a run-out route; Work was being done on the newly created Route 200 between Middle Path and Yellow Path. All other routes were blocked or were considered to be blocked. Inaccuracies in the transmission by the associations working in the mine area and the omission of detailed checks occasionally led to incorrect assessments of the mine situation, which resulted in wrong decisions. For example, the ban on White Path ordered on May 3 was based on the Fleet Command's assumption that mines had been laid north of Blaavands Huk in Danish sovereign territory, although the 14th Mine Sweeper Half-Flotilla operating there on May 1 correctly identified Barrier 44 and believed to have observed mines along the Danish sovereign border. This unnecessary abandonment of White Path, the difficulty of escorting slow submarines far enough on short nights on Route 300, and the insecurity of the Baltic Sea route caused by mines in the Kattegat created an uncomfortable situation. Red Path was now searched and, on the basis of fishermen's reports, mines were cleared from Barrier 55 south of the Amrum Bank by "E 45" on April 25th. But Route 300 didn't stay safe for long either.

On May 2nd "Princess Margaret" and "Angora" dropped Barrier 59 with 700 mines on the outer north turning spur of Route 300 and the following day barrier 60 further inward was also thrown against Route 300 by "Abdiel" and 7 destroyers. In the night from May 1st to 2nd, a convoy of the 2nd Escort Half-Flotilla (Kapitänleutnant Boy-Ed) was to 056 *alpha* middle, i.e. to immediately north of the area, in which barrier 59 was laid soon afterwards. In the night of May 2nd/3rd, a convoy of the 8th Escort Half-Flotilla (Oberleutnant z. S. d. R. von Horn) was led through the area in which barrier 60 was soon lay. On the same night the 10th Torpedo Boat Half-Flotilla (Kapitänleutnant Anschütz) passed the Barrier 59 thrown the previous night in the immediate vicinity on a stab voyage, while retreating at 3 a.m. they observed clouds of smoke in the south-west which were attributed to the 8th Escort Half-Flotilla. 300

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However, the 8th Escort Half-Flotilla was already much further to the east, so that in reality plumes of smoke were seen by "Abdiel" and the 7 destroyers, which were on the return march from the throwing of barrier 60. The 10th Torpedo Boat Half-Flotilla bumped into it marching on to the barricade that had just been laid, whereby "G 9" (Kapitänleutnant Schmidt, Erwin) ran into a mine at 3:27 a.m. on May 3. The forecastle, sections IX and X were blown off, section VIII ran full of water. The boat initially remained buoyant and was taken in tow by "G 8", command boat of the 10th Torpedo Boat Half-Flotilla. However, "G 9" sank at 4:15 a.m. with the loss of 3 non-commissioned officers and 28 men. The journeys through the northern part of Route 300 had often led to equipment being unloaded, so that the closures on Route 300 that had been made at the beginning were quickly recognizable.

Since on the 3rd evening the 2nd Escort Half-Flotilla (Kapitänleutnant Boy-Ed) was supposed to bring out two U-boats, an immediate check of Route 300 was urgent. The 3rd Minesweeping Half-Flotilla (Kapitänleutnant von der Marwitz) therefore proceeded in a broad formation between barrier 60 and the old barriers, so that the 2nd Escort Half-Flotilla could carry out the escort on the slightly modified Route 300. On the way back, the 2nd Escort Half-Flotilla got out of the way to the north and got hold of Barrier 29. "A 71" (1) (Oberleutnant z. S. d. R. Bogenschüß) was hit by a mine under the bridge at around 1:30 a.m., it was no longer possible to take it under tow and bring it in. All boats anchored nearby, launched cutters and recovered most of the crew of "A 71". The loss was 6 killed, 4 seriously wounded. At 2 o'clock "A 71" received a second mine hit in the area of the engine room and then sank quickly. The 2nd Escort Half-Flotilla then weighed anchor and got free from the barriers without further accidents.

During further work on Route 300, an attempt was made to create an exit to the north by making a dead-leg trip along the meridian of longitude 6° 42' E. Here, on May 13, "Kabeljau" (2) (Oberleutnant z. S. d. R. Funk) of the 12th Minesweeping Half-Flotilla (acting Kapitänleutnant von Holleuffer) received a mine from the old barrier in 102 *alpha* (3) into the clearing device. The mine detonated a short distance from the ship's side, "Kodjau" sagged sharply in front. An attempt was made to tow the steamer in via the stern. However, at around 3:30 a.m. there was a detonation in the machine, which caused "Kabeljau" to sink. There were no personnel losses. During the salvage work, the senior machinist mate d. S. II, Breise, who, despite the danger of a sudden sinking, carefully managed the boiler and machine served, as well as Oberbootsmannsmaat D. S. I Möller and signalman Reimer, who did their duty in an exemplary manner.

^{1) &}quot;A 71" belonged to the 3rd Escort Half-Flotilla and was temporarily made available to the 2nd Escort Half-Flotilla.

^{2) &}quot;Kabeljau" belonged to the 10th Minesweeping Detachment and was assigned to the 12th Minesweeping Detachment.

³⁾ North Sea VI. Map 16. Barrier #20.301

Loss of "G 8", "A 71" and "A 72"

On May 14, the 3rd Convoy Half-Flotilla (Kapitänleutnant Heeseler) lost while retreating from a U-boat convoy on the western end of barrier 39 "A 72" (Oberleutnant z. S. d. R. von Warzewsky) by mine hits with the loss of 25 dead, 1 seriously wounded and 7 slightly wounded The boat sank after two to three minutes.

On May 16, the 10th and 12th Minesweeping Half-Flotillas were returning from a dead end trip via the north exit of Route 300. South of point K, a mine from the old barrier (1) located in 098 *alpha* on the ship's side of the "Direktor Schauseil" (Leutnant z. S. d. R. Volk) of the 12th Minesweeping Half-Flotillas in the device. "Direktor Schauseil" was damaged and sank without any loss of personnel.

After the loss of "A 72", the 1st convoy Half-Flotillas (Kapitänleutnant Ottmer) received the order to make a stab voyage to 56° N. The stab voyage was carried out on the 20th time. Numerous surface stands were sighted in 051 alpha. The Half-Flotillas commander's attempt to run back between the surface stands after picking up the equipment did not initially succeed, as these were difficult to see due to the unfavorable falling moonlight. While bypassing the assumed barrier to the west, the command boat "T 185" (Oberleutnant z. S. d. R. Franke) at 1:19 a.m. on May 21, a mine detonated behind the stern, causing four more mines to detonate and "T 185" and the man behind "T 106" (Oberleutnant z. S. d. N. Gerdes) slightly damaged. The boats standing further back passed the barrier gap created by the detonation. It was the western part of barrier 64. Route 300 was now closed to the north, and the escorts were directed to Route 200.

The clearing of Route 300 was tackled with all means. In attempts to find a way out north on Route 300, which was renamed route 642 in its northern extension, "Direktor Schwarz" (helmsman d. R. Marcktvald) of the 7th Escort Half-Flotillas (Kapitänleutnant d. S. I Dennert) on May 23 at 7:30 p.m. on the outskirts of Route 300 on a mine of barrier 39. The Formation observed numerous surface stands on both sides. Three mine explosions took place nearby at the same time. "Direktor Schwarz" sank shortly after 8 p.m. after the crew floating in the water was safe except for one missing person. The half-flotilla started the retreat without further losses. On May 30, "M 48" (Leutnant z. S. d. R. Richter) of the 1st Minesweeping Half-Flotillas (acting Kapitänleutnant Hoffmann) received a mine hit under the stern on path 642, which tilted it about 45° upwards. Machines and screws remained clear, personnel losses did not set in. The mines belonged to the barrier 32 (2) thrown in April 1917.

¹⁾ North Sea VI. Map 16. Barrier No. 31.

²⁾ North Sea VI, Map 16.³⁰²

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On the return march from cleaning work on Route 642, "T 68" (helmsman Neugebauer) of the 3rd Minesweeping Half-Flotilla (Kapitänleutnant von der Marwitz) came across barrier 78 on June 4. The boat with the semi-flotilla was too far to the east of the searched route as a result of a Danish motor fishing cutter stopping nearby; it was shattered aft by two detonations and sank after 10 minutes. 7 men fell, 3 were seriously injured. Route 642 was passable after further search and clearing work on June 7th.

After completion of Route 642, a third route north of Route 200 was to be tackled from the outside in and also to receive submarines as soon as possible. On the outskirts of this path, during an escort trip by the 2nd Escort Half-Flotilla (Kapitänleutnant Boy-Ed) on June 6, in 161 *gamma* barrier 85 was discovered by a mine detonation in the device. The rapid discovery of this, which was thrown by "Abdiel" and 6 destroyers on June 5th and consists of 330 mines, made it possible to bypass barrier 85 to the north. On June 30th, the 8th Escort Half-Flotilla (Oberleutnant z. S. R. Roegner) on the return march from an escort on Route 200 near barrier 85 at 3.30 a.m., still in the twilight, attacked with machine guns and torpedoes by two enemy speedboats, which ran aground from the stern. The speedboat approaching 200 to 300 m from port turned towards the steamer "Neumeyer" (Vice Helmsman Millhagen) and fired two torpedoes at them, which went through under the bridge and at the stern. Both motor boats were fired upon by several steamers with 8.8 cm SK. A hit was observed on the speedboat approaching from port; the boat was no longer seen and considered sunk. The second boat turned south and came quickly out of sight in the dusk.

The no longer used *Dutch coastal path* was blocked from Vlieland to Ameland by 9 submarine mine barriers in May and 7 submarine mine barriers in June.

Yellow Route was considered heavily closed but was harmless at the end of time, time Barriers 42 and 52 west to southwest become temporarily clear. Reopening lockdowns came from Barriers 68 and 73, which were replaced further out in June by Barriers 97 and 99 after they had become innocuous.

The northward *outflow from the Nordmandstief* was blocked by three small U-boat timeblocks in an area that we did not navigate. Also in June 4 U-boat barrages were thrown in this area.

A cabinet order of April 28 had determined that all minesweeping and clearing units in the area of the High Seas Forces would be subordinate to a leader of the minesweeping and clearing units (F. d.M.). The lead ship was "Kolberg", until its completion "Stettin". As F. d. M. was commanded Fregattenkapitän Nerger; he took up his position on June 10th. June was a quiet month for mine countermeasures. Bad weather and widespread influenza among the High Seas Fleet crews had at times caused some minesweeping units to be shut down. 303

Design of protective barriers

During the first days of May, enemy submarines were repeatedly sighted in the inner German Bight, and the threat of submarines threatened to become more of a nuisance. The protective barriers against submarines that had already been envisaged in April have now been laid out:

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Barrier 61 on May 11th
                                           {by mine ship "Kaiser" (Kapitänleutnant
Grönhof)
       Barrier 62 and 63 on May 10th
                                           by II. A.G. (Commodore
                                           \{\text{von Levetzow}\) and mine ship
      Barrier 64 on May 12
                                           "Senta" (Lieutenant Captain d. R.
      Barrier 65 and 66 on May 13th
Langeneck).
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The barriers 63, 64, 65, 66 were so deep that they could be driven over if necessary.

At the beginning of May numerous reports arrived that the enemy was planning an operation against the German Bight, Admiral Scheer considered an incursion by the enemy with strong armed forces to be unlikely, albeit possible. The thought of a largescale air raid and a raid on the Heligoland harbor or the estuaries, similar to the attack on Zeebrugge, seemed more natural to him. The chances of success for attacks by naval forces were judged to be particularly favorable on days when aerial reconnaissance was not possible due to wind or lack of sight, and on the nights following these days. As a security measure, it was ordered that the outpost forces should also be on increased artillery readiness at night. At least one meeting of capital ships was placed as far forward as possible on Schillig Reede and increased air defenses were ordered. Flight reconnaissance by airships and planes began at dawn, and late reconnaissance was extended until nightfall. In order to reinforce the guarding of the mouth of the Ems, the S-Groups (1) were employed to continuously patrol the Ems by day and night. The torpedo boats at the outpost were reinforced into two flotillas, one flotilla on Schillig Reede, one half-flotilla on the Ems and one half-flotilla on Helgoland or List. The escort flotillas based in the port of Helgoland were ordered to keep their personnel and material, especially at night and in poor weather, so clear that they could take part in defending against an attack at any time. In order to throw protective barriers on the Ems and, if possible, outside the Ems in the event of an imminent attack, the "Arkona" was laid at Borkum Roadstead with a full mine load remain in outposts after dark and should have taken up outposts again by the time dawn set in. From May 8th, escort semi-flotillas patrolled routes 200 and 300. The outpost steamers stayed to increase alertness and reinforcement

1) Special groups of the North Sea Outpost Flotilla see North Sea VI, I	p. 172. ³⁰⁴
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The outpost steamers also continued to operate at night to increase vigilance and strengthen the guard, as far as this was possible without danger with regard to mines in their area. The barrier groups lying on Wilhelmshaven Roads were anchored as far forward as possible.

The High Seas Forces located in the Baltic Sea were ordered to the North Sea on May 9th, from May 10th further increased readiness was ordered for the combat forces of the High Seas Fleet. These orders were made on the basis of news which also gave reason to close the Westerems on May 10 with the planned mine blockade; this mine task was carried out by the cruiser "Arkona". The command of the naval station of the North Sea even went so far as to request the interpretation of the second regular mine meeting on the Elbe; however, the Fleet Commander did not agree to this request, since the threat to the German Bight was an unhindered one Leaving own forces to ward off enemy attacks required.

The increased readiness was already largely given up again on May 20, since the increased demands on personnel and material could no longer be carried out without damage. On June 12th, under the leadership of the deputy leader of the IV reconnaissance group (Kapitän z. S. Gygas), "Brummer" (Frigattenkapitän Schulz, Edmund) blocked 75 and on June 17th by "Brummer" and "Strassburg" (Fregattenkapitän Müller- Palm) lock 76 placed; these locks increased the security against an intrusion by the opponent. In the opinion of the Fleet Command, an energetic push by the enemy from the outside in could, despite all security measures, bring a certain, at least external, success. Given the considerable distances, a timely interception of such a break-in by naval forces was all the more important was the ordered air reconnaissance, in which airships advanced so far at night that they overlooked the area outside the neutral channel at dawn - and morning reconnaissance underway, with the airships often advancing to Norway. Airship reconnaissance took place on 12 days in May and on 9 days in June.

Apart from the more frequently reported enemy submarines, no significantly increased activity by the English was observed on the part of aircraft reconnaissance, which took place on 24 days in May and 17 days in June. Enemy surface forces were spotted by aerial reconnaissance for 5 days during May and June in the outskirts of the German Bight, and on June 30 a U-boat reported light enemy forces near Dogger Bank. These hostile reports between Doggerbank and Terschelling only involved a stronger formation on June 1st. The Kampfstaffel I (Lieutenant z. S. Freudenberg) had believed to have correctly identified cruisers of the Arethusa class and 3 American ships of the line from a total of about 32 units. Above this unit, 3 captive balloons were observed at a height of about 200 m. On the same day Kampfstaffel VII spotted 4 enemy destroyers with 4 Curtis boats in tow off the Terschelling Bank lightship, which were bombed by Kampfstaffel VII. The enemy fired heavily with shrapnel after the squadron dropped eight 10-kg bombs on the Arethusa cruisers. 305

Page 289 Blocking operations or "Arkona", "Brummer", "Strassburg"

An attacking Land-Spad single came within 25m and was forced to turn away by machine gun fire.

At around 7 a.m. on June 19, aircraft "1693" (Flugmaat Planert, Lieutenant d. R. d. M. A. Hinze) sighted an enemy aircraft mother ship with 4 destroyers on a NW course in the Hornsriff area. The aircraft squadrons "1693" and "1692" (Flugmaat Johanny, Flugzeugmaat Thaller) attempted a bomb attack, but was prevented by artillery fire. At 10:00 a.m. List's combat squad rose and sighted aircraft carrier "Furious" with 9 destroyers at 12:10 p.m. on a westerly course. The enemy was attacked with bombs, hits may have been made on a destroyer. The pilot aircraft "1796" (Lieutenant d. R. d. M. A. Wenke, Flugmaat Schirra) went out of sight in heavy shrapnel fire and was lost) the crew was taken prisoner.

There were no combat contacts worth mentioning between air forces and surface forces apart from those described. Combat contacts between own and enemy air forces occurred several times. So Kampfstaffel IV spotted two English Curtis boats between Teiel and Terschelling Bank on May 22^{nd} ; a chase ensued in which the pilot's own pilot aircraft "2043" (Vizeflugmeister Fillinger, Fl.-Ob.-Matrose Ramme) had to make an emergency landing. The crew was picked up by the escort plane, "2043" sunk. On May 20, aircraft "1785" and "1786" engaged in an air battle with a Curtis boat northwest of Borkumriff. On the same day Kampfstaffel I sank a Curtis boat lying on the water on the Dogger Bank. Part of the British and American crew was taken prisoner. On 4 June near Terschelling Kampfstaffel VI (Lieutenant d. R. Eichler) destroyed a Curtis boat lying on the water in a battle with five Curtis boats. The company's own combat aircraft "2210" (Flugmaat Tellgmann, Flugmaat Pieper) had to make an emergency landing with the left wing on fire and was sunk.

With the minor other aircraft losses in May and June it was not possible to determine to what extent they were due to enemy action. During the months of May and June, the only airship "L62" (Hauptmann Manger, Kuno) was lost in security duty on May 10. According to English accounts, the location and advance of an airship that was mistaken for "L 62" was verified as a result of radio messages the British Admiralty Observatory. Shortly after 11 o'clock they were so far in the picture that only a radio message from the airship was considered necessary to have a flying boat take off against the airship. At 12:08 p.m. the location for 11:34 a.m. was determined by the next radio message, which was the fifth from the airship in question. At 12:10 p.m. a flying boat under Captain T. C. Patinson took off. At 3:30 p.m., the flying boat sighted an airship about 1 nm away, 450 m above its own engine, which was heading for Helgoland. 306

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The English flying boat was at an altitude of 1800 m and had apparently been sighted by the airship, which was still trying to gain height. When the airship was at 2800 m altitude, the flying boat opened fire with explosive ammunition at a distance of 450 m. The fire appeared to be successful, as the airship, which continued to rise energetically, threw ballast of all kinds overboard, small signs of fire on the hull were visible. The battle was repeatedly interrupted by fire disturbances from the flying boat's machine guns and dragged on for a long time; the airship managed to drop 5 or 6 bombs on the flying boat below it. At a height of 3400 to 3800 m the flying boat opened fire again; further battle damage was observed on the airship, which appeared to be on the verge of destruction. The flying boat, which in turn had loading problems, projectile explosions in the machine gun and engine failure, did not continue the battle at first. The airship lost altitude and emitted plumes of smoke. Since, according to the English report, German destroyers were still shooting at the flying boat at this time, there was a lack of fuel and the distance from Helgoland was only 60 nm, the battle was broken off at 4.35 p.m. after 1 hour and 5 minutes of combat. A few days after the attack, the airship reportedly caught fire. These above combat data are based on the English - highly imaginative - reporting (1), which can be brought into a certain agreement with observations of a meeting of "L 56" (Captain Lieutenant Zaeschmar) and a flying boat, apart from the fact that "L 56" suffered no battle damage whatsoever. "L 56" sighted an English flying boat east of Dogger Bank on May 10 at 4:50 p.m. After observing "L 56", which itself climbed to 6,500 m, the flying boat had reached an altitude of at least 5,000 m. Since the flying boat was in the sun astern, "L 56" could not see whether the flying boat was firing. At 5:40 p.m. the flying boat went out of sight.

The loss of "L 62" is most likely due to the explosion of the airship in a thundercloud. The outpost boat "Immelmann" stationed between Helgoland and Amrumbank reported at 10:10 a.m. that at 10:05 a.m. there had been heavy detonations in a northerly direction with large amounts of smoke after the fire had developed watched and apparently an airship made of thunderclouds crashed burning. During the day, the bodies of the crew of "L 62" and the remains of the airship were recovered by the picket boat "Immelmann". The proven commander and his brave crew had not fallen victim to enemy action with the "L 62". It was understandable that the minesweepers working in the outskirts often complained about the weather-related failure of aerial reconnaissance, because timely reports of the enemy were extremely important for the minesweepers. In terms of weather, the limit for the use of aircraft was below the limit up to which minesweeping work was still possible. But there was also no lack of recognition of the activities of the air units; as was the case when the barrier 62 was thrown on the 17th.

¹⁾ Jones, "The War in the Air" VI. p. 335/57. 307

Page 291 Activity of the Heavy Security Forces

June felt particularly pleasant that airships carried out long-distance reconnaissance and airplanes were constantly in sight of the advanced ships and small formations.

In May and June, airplanes often reported mines, while airships were unable to carry out this reconnaissance activity because they were forced to fly at great heights due to the increased danger from aircraft. However, the practical use of mine reports by airplanes was small because of the accuracy of the navigation, which was not sufficient for the exact navigational localization of mines; For the reason mentioned, mine reports from aircraft often led to disturbing misleading observations of the mine situation.

The increase in the activity of ships of the line and cruisers in securing minesweeping work is evident from the following monthly summary of the cover activity of combat forces of the High Seas Fleet:

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Date	Place	Security forces	Cover about 50 nm behind
10.5.	Route 200	IV Squadron	
	" 300	III. Squadron	
11.5.	" 300	2nd Group III. squadron	
13.5.	" 300	IV Squadron	_
15.5.	" 300	2nd Group IV Squadron	_
16.5.	" 300	2 armored cruisers	"Posen". "Nassau"
17.5.	" 300	"Thuringia", "Helgoland"	"von der Tann", "Seydlitz"
18.5.	" 300	II. Reconnaissance Group, "Posen". "Nassau"	"Westphalia", "Helgoland"
21.5.	" 200	IV Squadron	_
24.5.	" 642	1. Group III. Squadron	1. Group III. squadron
26.5.	" 300	"Thuringia", "Helgoland"	"Seydlitz", "Hindenburg"
27.5.	" 642	"Posen", "Nassau"	"Thuringia", "Helgoland"
30.5.	" 642	II. Reconnaissance Group	"König", "Großer Kurfürst"
31.5.	" 642	II. Reconnaissance Group	1st Group III. Squadron
3.6.	" 300	IV. Reconnaissance Group	2nd Group IV. Squadron
4.6.	" 642	IV. Reconnaissance Group	"Oldenburg", "Nassau"
5.6.	" 642	"Oldenburg", "Nassau"	"Posen". "Helgoland"
7.6.	" 642	"Posen", "Heligoland"	"Ostfriesland", "Thüringen"
8.6.	" 200	II. Reconnaissance Group	"Oldenburg", "Nassau"
9.6.	" 300	II. Reconnaissance Group	Prinzregent Luitpold", "König Albert"
10.6.	" 200	II. Reconnaissance Group	Prinzregent Luitpold", "König Albert"
11.6.	" 200		III. Squadron

The need to anchor the security forces at sea at night in order to save on the long approach routes had become more and more apparent. At the beginning of May, the creation of a safe anchorage at Amrum bank, completely enclosed by nets, was envisaged for the work to be carried out to the north. 308



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The preparations for the establishment of this net barrier were made by the Baltic Sea Network Barrier Formation on June 20 near Amrum Bank. On June 29, the laying of the buoy net began, which was completed in 14 working days by July 20. The net was damaged in September as a result of bad weather and finally cleared again in October, since it had become apparent that this method of creating a naval anchorage at sea was associated with military disadvantages. To secure the security forces anchored in Hubertgat and to protect the Ems, a suspension buoy net was laid out in front of the Ems, which was completed on July 23.

Mine sweeping operations were also severely restricted in the first part of July due to the increasing spread of influenza. The main focus of the work was the cleaning up of Route 642. During a turnaround on June 18, the 8th Minesweeper Half-Flotilla encountered barrier 88, which was obstructing the northern exit of Route 642, and had ascertained the existence of this barrier without any problems by slipping out. The further determination and clearing of this barrier as well as barrier 78, which "T 68" had fallen victim to at the beginning of June, was tackled as the first task in July, after this work had not progressed in June due to the disabilities mentioned.

To carry out the task, the II Minesweeping Flotilla (Kapitänleutnant Doflein) with the 3rd (Kapitänleutnant von der Marwitz) and 4th Minesweeping Half-Flotilla (Kapitänleutnant von Zitzewitz) advanced on route 642 into the area of barrier 88 on July 1 until Equipment of the 3rd Minesweeper Half-Flotilla slipped out. When the device was picked up, "M 83" (Lieutenant z. S. d. R. Schultze) received three mine hits within a few seconds and broke apart. The stern of "M 83" swam for another half hour and then went under. The rescue work by boats of the 3rd Half-Flotilla lasted about an hour and was carried out in a commendably calm manner. The Commander, Half-flotilla Engineer and 31 men from "M 83" were rescued. The loss of personnel amounted to 14 dead and 2 seriously wounded. The Half-flotilla bypassed the barrier by swinging to the north and delivered the wounded to the cruiser "Königsberg".

The 4th Minesweeping Half-Flotilla caught mines again when approaching from a different direction. "M 92" (mine helmsman Stoldt) encountered a mine while picking up equipment, whereby the forecastle was blown off up to the bridge; the commander and 32 men were rescued, 15 men fell "M 92" was hopeless, the wreck was blown up.

In the meantime, work began on clearing Route 200, used by the submarine escorts, between points L and T to the restricted area border. U-boat escorts and stab voyage groups had passed this route on July 1 and 2, equipment had slipped out, but no casualties had occurred. On the morning of July 6, a slow convoy — 7th Escort Half-Flotilla with "UB 83", "UB 90" and "UB 124" — and a fast convoy — 2nd Escort Half-Flotilla with "U 55" — defected from Helgoland Turn off Brown on Route 200. At 10:40 p.m., the 7th Escort Half-Flotilla (on behalf of Oberleutnant z. S. dR Davids), which had been overtaken at 10:10 p.m. by the fast convoy standing about 1.5 m to the south, got caught in the old barrier 46 (1917); Wind NW, force 2, swell 2, swell 4.³⁰⁹

Page 293 Loss of "M 83", "M 92", "M 138", "M 172"

A mine detonated in the mine detector of the steamer "Hindenburg" (1) (helmsman d. R. Krüger) and tore the device away. Two other steamers each cut off a mine with the device and were each given another one in the sheer board minesweeper. Two devices had to be towed. The three steamers had held a total of 6 mines. In the rear group one device slipped out. The first group and the U-boats were ordered to anchor the second group was to steam about 2 nm to the south, and then use about the same route as the fast convoy. Shortly before midnight the second group received the order to turn around and pick up the U-boats. The U-boats, security boats and the first group followed then the second group in the searched strip first to the south, then on the way of the 2nd Escort Half-Flotilla.

The 2nd Escort Half-Flotilla (Kapitänleutnant d. R. Boy-Ed), who had heard the mine detonation at the 7th Escort Half-Flotilla and marched on, was about to end the escort when a minute after midnight the middle boat of the front group "T 148" (Oberleutnant z. S. d. R. Bußler) felt an impact and a minute later a mine detonated in the wake. Immediately afterwards "T 138" (Oberleutnant z. S. d. R. Fronke) received a mine hit between both funnels: the boat immediately broke apart. Shortly after the mine explosion there was a boiler explosion, after barely 4 minutes the boat sank. 2 deck officers, 13 non-commissioned officers and 17 men were killed, 1 man was seriously wounded.

"T 172" (2) (Oberleutnant z. S. d. R. Gerdes) — in the wake of "T 138" — swerved to starboard to get free. While turning, the boat also received a mine hit between the funnels, the stern remained buoyant. All boats towed the equipment, dropped anchor and tried to rescue the crews of the boats hit. The stern of "T 172" was still swimming. The oil boiler with the oil bunkers above was burning brightly. There was little prospect of bringing in the severely damaged boat. To the west, 15 to 17 clouds of heavy smoke were seen on the horizon, apparently units heading north-west. An attempt was therefore made to rescue all the people from the wreck of the boat; there was a risk that the drifting boat would hit another mine. Finally the commander of the half-flotilla decided to blow up the boat. 5 non-commissioned officers and 11 men fell on "T 172", 1 man was seriously wounded. The salvage work was made more difficult as a result of the strong swell. The motor dinghy from "T 135" (Lieutenant z. S. von Bentheim) excelled in the rescue work.

"T 148" and "T 135" were on the other side, "T 127" (Kapitänleutnant d. R. Ulrich) and "T 93" (3) (Lieutenant z. S. d. R. Hübner) on this side of the barrier to anchor, the distance was barely 500 m. The chief of the 2nd Escort Half-Flotilla asked the 7th Escort Half-Flotilla by radio to get the two torpedo boats to the west out of the shallow mines.

- 1) Assigned from the 6th Escort Half-Flotilla.
- 2) Assigned from the 1st Escort Half-Flotilla.
- 3) Assigned to the 1st Escort Half-Flotilla. 310

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At 4:00 a.m. on July 7, the 7th Escort Half-Flotilla dispatched the group "Mürwik" (deputy Commander Helmsman Marckwald), "Senator Wessels" (Leutnant z. S. d. R. Krafft) and "Münden" (First Helmsman's Mate Winkelmann) to the 2nd Escort Half-Flotilla. The three boats, which first had to repair their clearing equipment and lines, cut a total of 9 mines when passing the mine barrier twice. Thanks to the excellent behavior of the three boats, it was possible to cut out the torpedo boats, which were in great danger to get out of the barrier. Both convoys were able to start the retreat with their U-boats without further losses. The 2nd Torpedo Bboat Half-Flotilla had advanced from the Ems to take them up, 2 battle cruisers and 4 ships of the line from the Jade to cover them. The cover forces took the convoys Intersection of Brown Route and Route 200 on the morning of July 7. The submarines were sent through the Baltic Sea.

Renewed attempts to clear Route 200 were urgent and were tackled over the next few days with shallow-bottomed plow boats. On July 8th and 9th, the 13th Minesweeping Half-Flotilla collided with the 9th Minesweeping Half-Flotilla, the aircraft mother ship "Gertrud", "T 197" and the 2nd Escort Half-Flotilla, 3 torpedo boats of the II. Torpedo Boat Flotilla and for cover II. Reconnaissance Group, 2 Battlecruiser and 2 ships of the line advanced without the UZ boats having succeeded in finding a way clear by noon on July 9th. The equipment of the UZ boats had slipped out several times, and lead cap mines from barrier 85 laid on June 5 were found. The work had to be stopped on the morning of July 9 due to a lack of aerial reconnaissance.

On July 10, the 7th Escort Half-Flotilla, covered by the 13th TorpedoBboat Half-Flotilla, backed by heavy forces and airship backup, was scheduled for a dead-leg voyage on Route 200. Behind the bend in Route 200 in 021 beta, the boats "S 66", "V 83", "S 62" of the 13th Torpedo Boat Half-Flotilla and "S 89" (1) with the 7th Escort Half-Flotilla, which was marching ahead, joined up. This consisted of the trawlers "Mürwik", "Senator Wessels", "Münden" (first group) and "Admiral Souchon", "Schleswig" "Lützow" (second group), "A 79" (2) as the guide boat and "Elsfleth" and "Konsul Reepen" as a safety boat. Barrier 85 was to be bypassed to the north and the lead cap mines (Barrier 85) detected by the UZ boats in the last few days remained lying to the south. Moderate WSW wind, light seas, good visibility. At 8:45 p.m slipped out the device in the first group (lieutenant z. S. d. R. Krafft), and when the second group (helmsman d. S. II Wendler) passed the point of slipping out, the middle boat "Schleswig" cut a new lead cap mine away. All the circumstances examined afterwards indicate that the formation was about 3 nm further south than it assumed and that it had grasped the north end of Barrier 85. This was found for the first time on June 6 shortly after being thrown by the 2nd Escort Half-Flotilla. At 9:15 p.m., following the mine report, the commander of the half-flotilla (acting Oberleutnant z. S. d. R. Davids) gave the order to go on the opposite course, since according to the instructions given to him, the stab voyage was to be aborted if lead cap mines were encountered.

¹⁾ Assigned from the 14th Torpedo Boat Half-Flotilla.

²⁾ Assigned to the 3rd Escort Half-Flotilla³¹¹

Page 295 Sinking of the 13th Torpedo Boat Half-Flotilla

The torpedo boats marching behind the 7th Escort Half-Flotilla did not stay behind when the mine alarm was sounded, but sat down behind the squadrons, whose devices did not seem to have slipped out.

When the front group of the 7th Escort Half-Flotilla had turned about 90° to port, "S 62" (Kapitänleutnant Schniewind, Otto) received a mine hit in the engine room at 9:30 p.m. on the slip-out site of the first group. After the mine hit, "G 89" (Oberleutnant z. S. Christ, Justus), "S 66" (Oberleutnant z. S. Brodersen, Jacob) and "V 83" (Kapitänleutnant Schimmelpfennig, Erich) continued the march behind the 7th Escort Half-Flotilla to the west away and then went east behind the 7th Escort Half-Flotilla.

The motorboat of "Elsfleth" (Leutnant z. S. d. R. Schreyer), who stayed behind with "Konsul Reepen" (helmsman z. R. Bielefeld) to provide assistance at the scene of the accident and the cutter of "G 89" tried to save the crew of "S 62". "S 62" sank quickly; parts of the crew were standing on the forecastle, some without life jackets. The commander of "Elsfleth" decided to walk alongside "S 62" to save the people while the people were still lying alongside, a violent detonation occurred in the stern of "S 62". "S 62" broke through and now sank very quickly. "Elsfleth" now steamed free of the dangerous spot with extreme force and followed the two search groups to the west. The motorboat from "Elsfleth" had meanwhile brought 20 men to "G 89" and towed the cutter from "G 89", which was loaded with rescued people and could no longer make it against the wind and sea, back to its boat.

In the meantime, the first group of the 7th Escort Half-Flotilla had turned around with newly deployed equipment. Behind her stood the second group as well as "S 66", "V 83" and the command boat of the 7th Escort Half-Flotilla "A 79" (Leutnant z. S. d. R. Kränkel); "Elsfleth" joined them later. At 9:45 p.m. the search line for the front group broke while driving on, while passing this point "Schleswig" cut another mine. "S 66" and "V 83" anchored there shortly after 10 p.m. "Elsfleth", which was initially of the first group followed, was then led out of the endangered area by the second group with about 45 rescued from "S 62", while the first group received the order to get the torpedo boats out of the barrier. The severely wounded and rescued were handed over at 1.40 a.m. on July 11 to "Frankfurt", which, in response to a radio message, had run to meet the returning convoy. The steamer "Elsfleth", which had been operated with particular care and energy, had rescued a total of about 65 men from "S 62", 20 of whom had taken the motorboat to "G 89".

The commander of the 13th Torpedo Boat Half-Flotilla (Kapitänleutnant Röder von Diersburg) dispatched the motorboat from "S 66" to the accident site of "S 62" after anchoring. At 10:15 p.m., the motorboat with Lieutenant z. S. Rollmann, who at his request was in charge of commanding the boat, and two men (torpedo chief seaman Kelling, torpedo engineer trainee Munsel) departed. It was an open motor dinghy with two folding canvas tops. The equipment consisted of a compass, towing line, transport hammock, Morse lamp, star signal pistol and 6 loaves of bread. 312

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The motorboat, supported by the searchlight of "S 66", headed for the scene of the accident and met the fully occupied cutter of "G 89", which showed the spot where survivors were supposed to be floating.

As instructed, the first search group of the 7th Escort Half-Flotilla turned around with the two remaining boats, "Senator Wessels" (Leutnant z. S. d. R. Krafft) and "Mürwik" (on behalf of helmsman Marckwald) and rounded them in a curve Anchored boats "S 66" (Oberleutnant z. S. Brodersen, Jacob) and "V 83" (Kapitänleutnant Schimmelpfennig, Erich). Steamer "Münden" (Ob.-Strm.-Maat Winkelmann) was left behind to save time and because maneuvering with two boats was easier. When the search group steamed past at a distance of about 75 m from "S 66", this boat, which was just anchored cleared, a mine hit, which completely tore "S 66" apart in a column of fire. After the explosion, no more debris was seen "V 83" to come. "V 83" sat down at 11 p.m. behind the search squad, which was now also supposed to retrieve "G 89", but searched too far north for the torpedo boat and initially did not find it. As they continued to march, the gang met the steamer "Konsul Reepen" (helmsman d. R. Bielefeld), which was able to indicate the location of "G 89" and followed. The search squad now drove past "G 89" and led the two torpedo boats and "Konsul Reepen" south and then on the return course. The torpedo boats anchored at 20 minutes after midnight, followed a little later by the outpost steamers, which in the meantime had also been joined by the steamer "Münden". It was the prudent and courageous behavior of the senior group leader of the 7th Escort Half-Flotilla, who was well supported by the other group leaders and commanders, lieutenant z. s.d. R. Kraft, thanks to the fact that the torpedo boats were brought out of the minefield as bad weather approached. The Fleet Commander talked about the 7th Escort Half-Flotilla for their resolute, dashing behavior on the 6th/7th. and 11./12. July with his special recognition.

The commander of the 7th Escort Half-Flotilla (i. V. Oberleutnant z. S. d. R. Davids) on "A 79" had stood between the two search groups until the first mine hit on "S 62". He then took part in all rescue work on his boat, conveyed orders to the individual groups and vehicles and was always where his help and presence was required. "A 79" was last seen by "Consul Reepen" at midnight, when "A 79" was trying to find a cutter that had been driven away and was occupied by rescued people north-west of the scene of the accident. The motor dinghy of the lieutenant z. S. Rollmann had noticed "A 79" during the rescue work of the survivors of "S 66" and was temporarily in the vicinity of "A 79" in order to be photographed by him later; at 0.15 a.m. Lieutenant z. S. Rollmann, two detonations in quick succession in the stern of "A 79", which quickly caused "A 79" to sink. The "S 66" motor dinghy was 500 m downwind of the scene of the accident and had trouble getting out of the black oil smoke that was pouring out of the funnels of the sinking boat. It was not possible for the motor dinghy, whose motor was unclear, to get to the site of the detonation against the sea.³¹³

Page 297 The homeward journey of the motor dinghy from "S 66"

At about 3:30 a.m. on July 11, the steamers of the first group came to the torpedo boats and were given the order to search for the motorized dinghy of "S 66", which had been driven out and had since disappeared, to the north-west. Since the search group received orders at the same time, not over "V 83" and "G 89" started the march to the east behind the search group at about 5:30 a.m. The casualties of the night were as follows:

- "S 62": Killed 2 officers, 25 non-commissioned officers and men, wounded 2 deck officers, 11 men.
- "S 66": 3 officers died, including the half flotilla commander, Kapitänleutnant Freiherr Röder von Diersburg, and the commander, Oberleutnant z. S. Brodersen (Jacob), and 73 non-commissioned officers and enlisted men.
- "A79": 3 officers killed, including the deputy half flotilla commander, Oberleutnant z. S. d. R. Davids, the commander, Leutnant z. S. d. R. Krankel and the ship's doctor, Mar. Ob. Ass. R. Dr. Zacharias-Langhans, 50 non-commissioned officers and 53 men.

The motor dinghy of "S 66" under Lieutenant z. S. Rollmann had energetically approached the rescue work in wind SE force 4, overcast skies and initially clear air. After the search for survivors of "S 62" had been in vain, drove the motor boat to the detonation site of "S 66", from which it was about 1 nm away. Torpedo flares marked the accident site. 18 people wearing life jackets were admitted. The motor dinghy was just about to respond to the calls for help from the three rafts about 100 m away when the engine suddenly burst into flames soon after midnight. The immediate danger of an explosion was averted by quickly grabbing hold of the engine, but the water used to extinguish it made the engine unusable for the foreseeable future. The two in the boat Oars were manned, but in the already considerable swell it was not possible to maneuver the heavily loaded boat. Lieutenant z Rollmann first had the engine made operational again so that he could provide effective help when it got light. When the south-easterly wind picked up, the dinghy was increasingly pushed away from the anchorage of the other vessels; Anchoring was out of the question as there was no anchor in the boat and a sea anchor could only be made later. At around 4:30 a.m., the engine was primed again with a spark plug, with considerable difficulty. The boat was in the midst of the rubble of the "A 79" and between floating corpses. There was no longer any chance of finding any survivors.

An adventurous voyage now followed: drifting, sailing, rowing, only occasionally running the engine when fuel was low, attempts were made to bring the boat home in an easterly direction. Thanks to the unwavering energy and perseverance of the lieutenant z. S. Rollmann and the steadfast perseverance of the team, some of whom were seriously wounded, freezing, starving and thirsty, succeeded to reach the south of Hornsriff near the south coast on July 17th in the evening of July 17th after severe exertion and hardship in partly wind force 6 freshening weather. 314

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At 5:15 p.m. about 25 nm from land, which had not yet been sighted, three airmen approached at low altitude; The pilot of the aircraft was Lieutenant d. R. d. M.A. Heineck. The lead aircraft came alongside and initially left the dinghy with its emergency provisions. Less than an hour later, the shipwrecked were rescued in the face of a large number of planes from the List air station. 200 nm had been covered in a journey of almost seven days. The rescued were brought ashore in exhausted but safe condition. Discipline had been effortlessly maintained to the end, despite increasing exhaustion, which eventually led to general fatigue and irritability in the cramped boat.

The area of work of the minesweepers was right on the edge of the reconnaissance range of the air stations. For air security, therefore, aircraft motherships had to be used to an increasing extent, of which only the cruiser "Stuttgart" was available at the time, since the aircraft mothership "Santa Elena" was in the shipyard for conversions. The aircraft carrier "Furious" had also been regularly deployed by the English side in recent weeks in order to have aircraft search the entire mine belt from one end to the other. These aircraft with land landing gear had been given the special task of fighting the German airships. On the morning of July 19, three landplanes, launched from the "Furious" 80 nm from Tønder, managed to advance to the airship halls and barracks of Tønder shortly after 4:30 a.m. The air traffic service reported these aircraft only one minute before they attacked. The prevailing WSW wind force 5 to 7, gusting up to 9, changing clouds and visibility; no aircraft reconnaissance was flown by the commander of the aviators of the High Seas Forces due to the weather conditions. The British aircraft scored several hits on both hangars in two approaches at 4:33 and 4:50 a.m., the airships "L 54" and "L 60" burned down during the first attack. The loss of personnel was 1 seriously injured and 3 slightly injured. The enemy planes came under artillery and rifle fire, but managed to escape. In response to the attack, all of List's aircraft were launched in full swing. At Lyngvig, 1 aircraft carrier, 1 Armored Ship and 8 destroyers were sighted by reconnaissance aircraft; Fighter and bomber planes did not see the enemy. Also II. Reconnaissance Group and I. F. d. T. with VI. Flotillas of torpedo boats that advanced south of Hornsriff failed to find the enemy. The achieved success of the opponent, however, was costly. Out of a total of 7 "Furious" planes that took off, 2 did not find their way back to "Furious" and landed in Denmark. 1 aircraft had engine failure and had to make an emergency landing at sea before reaching land; a fourth aircraft made an emergency landing in Denmark after the attack and another aircraft was sunk (1).

In the further course of July, the expansion of the route from point L, via point T to the restricted area border was tackled under the new name Route 500.

¹⁾ Captain J Morris. The German Air Raids on Great Britain 1914-1918. p.

Carrier aircraft attack on Tønder.

During the work, minesweepers encountered parts of the old barrier 23 from 1917; the outer part of the road was cleared by mine clearing work and a stab voyage on July 27 so that it would no longer pose insurmountable difficulties for a convoy. In this way, an attempt should now be made as soon as possible to push out of the mine belt in the form of a collective escort for several U-boats under the strongest security. The operation was carried out on July 31st with only one submarine, as only this was available for bringing out. 5 minesweeping half-flotillas of medium-sized boats and 3 minesweeping halfflotillas of trawlers were involved, all under the command of the F. d. M. on "Königsberg", 2 fast escort half-flotillas under the command of the Escort Chief, 2 torpedo boat flotillas, I. Reconnaissance Group, III Squadron, II. F. d. T. on "Graudenz" and aircraft mother ship "Stuttgart". Hard on the border of the restricted area, just as the U-boat was about to be released, the 8th Minesweeping Half-Flotilla (Kapitänleutnant Tschirch) came across mines from the barrier 22. "M 6" (Obersteuermann Hashagen) of the 1st Minesweeper Half-Flotilla (1) was hit by a mine amidships and sank. 4 deck officers and 31 men were rescued by dinghies, 5 men were missing. The command boat sighted a mine that was 1 to 2 m under water; the B. d. A. now ordered the creation of a blocking gap for the submarine. The gap in the barrier was reported clear at 5:30 p.m. and the submarine was guided into the free fairway.

During further work on Route 500, on August 2nd, the trawler "Köhler" (helmsman Rothhahn) of the 11th Minesweeping Half-Flotilla (Kapitänleutnant d. R. Klose) ran into a mine at barrier 23 from 1917. Two men were light injured, the boat slowly filled up and sank before an attempt to pull it out of the barrier was successful.

During July aerial reconnaissance by airships took place on 7 days, by airplanes on 18 days. On the morning of August 1st, aerial reconnaissance sighted several enemy formations in the neutral fairway between Doggerbank South and the Terschelling lightship. The airships "L 56" and "L 70" as well as the airplanes "1890" and "1784" contributed to these enemy reports. Numerous capital ships, cruisers and destroyers were identified, the presence of which can be linked to the collective convoy that had appeared the day before. Leaving fleet formations could no longer approach. "L 70" pursued the evasive enemy forces and believed that it had scored bomb hits on destroyers. The enemy sighted at 9 a.m. near Terschelling South on a westerly course came into view at 2:50 p.m. after the "L 70" was on contact and reported.

At 9 a.m. on August 2nd, "L 64" sighted 6 large enemy biplanes directly below at the airship security station in the west 50 nm north of Texel gave up the attack.

¹⁾ Assigned to the 8th Minesweeping Half-Flotilla. 316

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At around 2:15 p.m., "L 64" was fired on by destroyers about 40 nm south of Doggerbank South.

After a break of several months, during which the reconnaissance activities of the airships had been in the foreground, an attack flight against England was ordered for August 5th to 6th. As with the last attack on April 12 and 13, the F. d. L., Fregattenkapitän Strasser, the attack, this time from "L 70". The order read: "Attack south or centre, London only by order of F. d. L." Participants "L 53", "L 56", "L 63", "L 65", "L 70".

""L 53" (Korvettenkapitän d. R. Prölß) left Nordholz at 2 p.m. on August 5, heading via Helgoland to the Wash with the intention of attacking Nottingham or Sheffield, depending on the weather conditions. During the entire voyage, relatively low wind speeds from the south-west, on the English coast from the west and north-west, were encountered up to a height of 6000 m. Changing cloud cover mostly allowed good visibility downwards. Due to the light wind, the English coast was reached before dark and up and down off the coast until about 10 o'clock. At 10:15 p.m. "L 53" was over Boston. Shortly before, a burning airship was sighted on the port side over Norfolk and it was assumed that the airship had been shot down by an airplane because it was still very bright. A further advance into the interior of the country was therefore abandoned and the entire ammunition — 2800 kg of high-explosive and 130 kg of incendiary bombs — was dropped with little resistance. After an uneventful retreat, "L 53" landed at 6 a.m. on August 6 in Nordholz.

"L 56" (Kapitänleutnant Zaeschmar) rose shortly after 3 p.m. on August 5th. South of the East Frisian Islands, they climbed to an altitude of 4500 m and steered to the NW over a thunderstorm. This airship, too, had to change courses for the same reason as "L 53" stand up and down the coast. At 9:45 p.m. the lights of Yarmouth and other English ports could be seen. The other airships were clearly seen crossing the coast against the bright evening sky at very long ranges. At around 10:15 p.m., a burning airship crashed near the Wash. At 11:10 p.m. the coast south of Lowestoft was crossed on a nest course and at 0:15 a.m. lights which, after bearing and coupling, were addressed as Norwich were bombed (2600 kg). Effect was not observed due to poor visibility. When crossing the coast on a NE course it cleared up a bit, a shore battery fired some ineffective shots behind the airship. The landing took place at 6:15 am on August 6 in Wittmundhaven.

"L 63" (Kapitänleutnant von Freudenreich) rose shortly before 2 p.m. At 8:22 p.m. fishing vessels were sighted and shortly afterwards lively English FT traffic was heard on shortwave. At 10:10 p.m. the airship was in the Humber Estuary. "L 70" and "L 65" stood on port astern. Contrary to previous experiences, the coast did not reveal itself with early lighting and shooting. The cloud cover was loose, quite bright illumination. At 10:15 p.m. the crash of "L 70" was observed and the presence of aviators was observed closed. At the same time, the ship was heavily fired with shrapnel and incendiary rockets from several batteries sighted ahead.³¹⁷

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Due to the suspected presence of aircraft and insufficient darkness to continue the march, all the ammunition (2600 kg of high-explosive and 20 incendiary bombs) was dropped on the shore batteries. The march back was uneventful. "L 63" landed in Ahlhorn at 5 a.m. on August 6th.

"L 65" (Kapitänleutnant Dose) intended to attack central England and rose at 2:35 p.m. The English coast was reached too early and waited until nightfall. Because of the bad temperatures it was not possible to reach the attack height. There were therefore 1000 Kg bombs dropped at sea. "L 70" had followed "L 65" on a broad, low cloud cover just off the English coast also attacked by planes. The crash of "L 70" was observed at around 10:15 p.m. "L 65" was also noticed by English pilots, allegedly "L 65" was not completely darkened for brief moments. However, several aircraft standing in the vicinity of "L 65" did not manage to get close enough to the airship to attack successfully. In order to get out of the firing range, they turned to a north course. "L 65" was now being followed by aircraft further north Batteries on fire. Since the airship was at an altitude of only 5300 m, a battery near Kings Lynn was bombed with 1700 kg of bombs. While turning on a NE course, the airship was again fired on by a battery. The march back, during which some cells ran empty as a result of hits, was otherwise uneventful. The landing took place shortly before 7 a.m. on August 6 in Nordholz.

According to British information, the attacks by "L 53", "L 56", "L 63" and "L 65" were all unsuccessful. It is said that no bombs were dropped over land from these airships.

"L 70" (Kapitänleutnant von Loßnitzer) with the F. d. L., Commander Strasser, on board, was sighted by the English lightship "Lemant Tail" at 8:10 p.m., as were "L 53" and "L 65". "L 70" furthest north and further out to sea. An hour later a plane under Major E. Cadbury took off from Yarmouth northwards above the clouds with exceptionally good visibility. The English plane sighted the three airships about 40 nm away on a westerly course "L 70" was attacked at an altitude of 5000 m and quickly set on fire. The airship crashed into the sea near the schooner "Amethyst". Fregattenkapitän Strasser and the entire crew of "L 70" were killed.

With this brave, energetic and organizationally excellent officer, the naval airship force lost its best man. Fregattenkapitän Strasser's qualities as a leader, his rousing personality and his unusually strong influence on the attacking spirit of the airship crews had been able to push the naval airships' weapon, which was still under development, forward again and again, despite all the setbacks and losses. Firmly convinced of the value of the means of combat and reconnaissance entrusted to him, he continued to use the airships to attack the enemy when doubts arose as to whether the sensitive and large airships are able to withstand the counterattack of the aircraft, despite seeking great heights and despite improving their own handling and combat characteristics. 318

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Fregattenkapitän Strasser underlined his conviction of the combat value of the airships through active personal commitment to the last, he died as a shining example of exemplary operational readiness.

The offensive run led by Fregattenkapitän Strasser on the night of August 5th and 6th was the last offensive run by naval airships against England. It was also the last offensive operation against England carried out under the direct supreme command of Admiral Scheer. On August 7, Admiral Scheer relinquished command of the High Seas Forces to take on higher and broader responsibilities as Chief of the Admiralty Staff. Vizeadmiral Ritter von Hipper (1) assumed command of the Fleet. On August 26, 1918, the new Fleet Chief announced the following guidelines to the airship commanders for the further use of airships:

"The growing enemy resistance, above all the increasing performance of the aircraft and their effective advance into the area of the German Bight, cannot remain without an influence on the use of our airships.

It must also be recognized that in the battle of airplane against airship the airship has lost its superiority at the present time; the heights reached by the airship no longer offer him any protection.

On the other hand, our aviation has also developed to such an extent that it has increasingly taken up reconnaissance and cover up to the outskirts of the German Bight, as well as combat there. From this it follows that under normal circumstances ongoing security in the peripheral area of the German Bight is no longer the task of airships. Nor will it be for the airships to maintain close contact with the enemy when he enters our closer combat area.

The task of the airships is to provide us with long-distance reconnaissance over the sea in good weather a view of the wider North Sea, to protect us from surprise by sweeping advances and, as soon as enemy combat operations threaten the German Bight, to give us a quick view of the free flank. A reconnaissance that reaches as far as the Norwegian coast or into the Skagerrak can possibly be of decisive importance for us.

The technical superiority that we have maintained over the enemy in the development of the airship gives us advantages that we must not let go of if we do not want to give up great military values. The enemy's attempt to rob us of our superiority in long-distance reconnaissance at sea with seaplanes or even landplanes brought forward into the North Sea must not deter us.

It will be up to the commanders to weigh up the extent to which reconnaissance, given the respective conditions of visibility, cloud cover, etc., requires the use of the ship.

1) Promoted to Admiral	on August 11, 1918. ³¹⁹
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Airship Use Restriction

The airship should not be deprived of the right to attack and fight, but the possible success must not conflict with the mission. As far as the attack on England is concerned, it must also be taken into account that tying down the large quantities of defense material and personnel means a great deal of relief for the army.

We must continue to strive tirelessly to increase the performance of the ships and not simply give up the tremendous successes of the airship weapon from the wartime up to now in the face of the resistance that is now being felt."

A scheduled airship security service in the outskirts of the German Bight no longer took place in the future, the approach of airships for long-distance reconnaissance should be ordered for individual cases.

Change in Fleet Command. Naval Command

Admiral Scheer was appointed Chief of the Admiralty Staff in place of Grand Admiral von Holtzendorff on August 11, 1918. On the occasion of his dismissal from the position of Chief of Staff, Admiral von Holtzendorff was promoted to Grand Admiral in recognition of his great service as Fleet Commander before the war and as Chief of the Admiralty for almost three years of the war. The state of health of Admiral von Holtzendorff, whom Admiral von Müller saw as a seriously ill man at the end of July, had left a lot to be desired for a long time. Admiral von Holtzendorff was not ignorant of the fact that he often lacked resonance at the front, especially on the staff of the Fleet Command, and that his person was gladly blamed for supposed setbacks in naval warfare. A certain contradiction, inherent in the nature of things, between the Chief of the Admiralty, who was bound by a variety of considerations, including, of course, political considerations, and the front, had been exacerbated by the development of the naval war situation. During the first year of its course and the months that followed, the U-boat war brought sinking results that corresponded to the forecasts and in many cases even exceeded them; but the results were not sufficient to make England willing to make peace. The U-boat front therefore rightly claimed that it had done its part to the full. The front, which often judged prematurely, accused the Chief of the Admiralty of being overly optimistic and, based on this, not always adequately utilizing all naval warfare resources to be used against England. Admiral von Holtzendorff was familiar with these frontline regulations; However, he was fully aware of the Imperial confidence and of the successful work of the Admiralty under the most difficult circumstances. The head of the naval cabinet, Admiral von Müller, who was responsible to the Kaiser for personnel matters, had no doubt that Admiral von Holtzendorff not only enjoyed the Kaiser's warm recognition, but also had a right to the gratitude of the Navy. From his side, therefore, the dismissal of Admiral von Holtzendorff from his position as Chief of Staff of the Admiralty was not approached for factual reasons, only health reasons came into question.³²⁰

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In the second half of July, Admiral von Hotzendorff himself realized that he should leave his office: Increasing physical complaints and the need to take several months off to regain full working capacity made him decide to ask the Kaiser for his dismissal to ask from his position. The desire of the front, not unknown to him, to see Admiral Scheer, who was generally valued as the strongest and best personality, in the position of Chief of the Admiralty, contributed not insignificantly to his loyal decision. Admiral von Hotzendorff, in agreement with the Chief of the Naval Cabinet, proposed Admiral Scheer as his successor at the same time as asking for his removal from his post.

With the appointment of Admiral Scheer as Chief of the Admiralty on 11 August 1918, there were personnel and organizational changes in the Admiralty. According to the organization that had existed since the beginning of the war, the Supreme Command of the Navy was carried out by the Kaiser as Chief of the Naval War Staff, the Chief of the Admiralty Staff served the Kaiser as a command organ and issued general directives from the Kaiser. Depending on their degree of importance and fundamental nature, these instructions were signed by the Kaiser himself or by the Chief of the Admiralty "by the highest order". The Chief of the Admiralty therefore had, without having any authority of his own, over the Kaiser, whom he was responsible for advising, decisive influence on naval warfare. The limit up to which orders were made by the highest command was a question of personality and discretion. Conflicts that had frequently arisen between the Admiralty and the seafaring front had had the natural consequence that strict observance of command competencies was observed. War success and the popularity of Admiral Scheer did the rest to limit an extension of the Commander-in-Chief of the Chief of Staff of the Admiralty, which was quite possible with different personnel.

After his personal arrival at the General Headquarters in Spa on the day of his assumption of office, Admiral Scheer had no difficulty in establishing a newly formed operations department of the Admiralty staff, called "Naval War Command", with the Kaiser. The change was announced by a cabinet letter; it was associated with the authority to sign orders for the Naval War Staff "on the part of the Naval War Staff" and was ultimately supported by the retiring Admiral von Holtzendorff, despite formal and factual concerns from the Chief of the Navy Cabinet. This reorganization transferred part of the Naval War Command, which had previously only been personified by the Kaiser, to the Admiralty under the authority of the Chief of the Admiralty. An outwardly inconspicuous but significant transformation of the position of the new Chief of the Admiralty and of the Naval War Staff was created: the Chief of the Admiralty was now placed next to the organization of the army with his command power embodied in the Supreme Army Command. Field Marshal von Hindenburg and General Ludendorff warmly welcomed the reorganization and the transfer of operational control of naval warfare to General Headquarters in the interests of closer cooperation.³²¹

Formation of the Naval War Staff

The personality of the victor of the Skagerrak, the new formation of a naval warfare command under the Chief of the Admiralty with the proven Operations Chief of the High Seas Fleet, Kapitän z. S. von Levetzow as Chief of Staff, the occupation of the Naval Operations Command by officers experienced in naval service, and the relocation of the Naval Operations Command to the General Headquarters were the main reasons for the widespread hopes associated with this change in naval warfare that the war at sea would be revived.

The assumption of the Admiralty by Admiral Scheer and the now established full agreement between the Naval Operations Command and the High Seas Fleet did not bring about any significant changes in the operations of the U-boats and the use of the High Seas Fleet, since the basic view of the naval war situation was not changed either in the Admiralty or at the front had changed something. According to the officially determined results, the sinking of merchant ship tonnage corresponded to the expectations that had been entertained by all at the start of unrestricted submarine warfare: the average of 600,000 Br. R. T. per month was well achieved up to and including July 1918 (1). A certain drop in the sinking results in June (521,000 Br. R. T.) and July (550,000 Br. R. T.) 1918 was not due to fundamental reasons at this time, such as the correctly assessed enemy defenses, but to military-related fluctuations in the ongoing use of U-boats, attributed to weather conditions, delays in preparing U-boats for the front and other things. Such fluctuations, which in the opinion of the Fleet Command had been exacerbated by the occasional use of U-boats in secondary theaters of war, the new Naval Operations Staff now hoped to reduce by increasing concentration in the area around England. In the summer of 1917, too, the number of sinkings had fallen; since then the merchant ship losses had, on the whole, according to the German assumption, remained between 600,000 and 700,000 Br. R.T. Even then, the Chief of Staff of the High Seas Fleet, Konteradmiral von Trotha, had reckoned that the center line of the U-boat sinkings would sink a little lower because the enemy had organized themselves and had learned a lot. Despite falling losses, Konteradmiral von Trotha considered the game against England to be a win. At that time — October 24, 1917 — the last sinking result was 600,843 Br. R.T. announced for September 1917. There was also no reason to fear that the U-boat losses would no longer be covered by new ships, although increasing U-boat losses were expected. Neither before August 1918 nor after Admiral Scheer took over the command of the naval war was there not the slightest doubt in any responsible position that submarine warfare was still the essential means of naval warfare against England. The U-boats remained the most important means of war in terms of overall warfare. According to unanimous opinion, all measures of naval warfare had to serve submarine warfare.

Compared to these unchanged basic views, only the will to get more out of the submarine as a means of war than before had increased, in order to strengthen the decisive influence of this weapon in the increased approach of the U-boats.

¹⁾ In reality, the sinking results were lower than was assumed at the time.³²²

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This will was embodied in Admiral Scheer, the Naval War Command and the front offices responsible for submarine warfare, primarily the Fleet and Marine Corps Flanders. The opinion was something like this: The submarine war will succeed if everything in our power is done for the submarines. However, more can and must be done! — But it was less operative than material measures that were to be tackled again, namely expansion of the submarine construction program and pressure for faster and more punctual delivery of submarines under construction. As an operational improvement, during Admiral Scheer's first meeting on August 11, 1918, the U-cruiser formations, which had previously been directly subordinate to the Admiralty, was placed under the command of the Fleet Commander, which should enable a more uniform use of the U-cruisers in the sense of the previous Fleet Commander.

As far as the use and deployment of the High Seas Fleet were concerned, the previous principles remained the same in this often disputed question. An unconditional deployment of the High Seas Fleet was out of the question as long as the creation of mine-free routes for the U-boats through the North Sea and Baltic Sea was only ensured by the deployment and availability of the High Seas Forces. Nor could the conduct of a large-scale naval operation using the bulk of the U-boats to fight the English Grand Fleet be regarded as expedient, since this shifted the generally recognized focus of naval warfare against England from the fight of the U-boats against the merchant tonnage would.

On August 5, during the transfer of his duties, Admiral Scheer was asked by an officer of the Admiralty staff sent to Wilhelmshaven to decide how an army operation (1) to be carried out in the eastern Baltic Sea against Petersburg and Kronstadt could be supported by High Seas Forces. When determining the size of the Forces, it had to be borne in mind that in view of the difficulties in supplying fuel, limitations to what was absolutely necessary were necessary; The Fleet Commander decided that the battleships "Ostfriesland", "Thuringia"," Nassau", under the command of the 1st Squadron, to whom overall management of the operation was transferred, the commander of the 4th Reconnaissance Group with the cruisers "Stralsund", "Strassburg" and "Brummer" a barrier breaker group, VI. Torpedo Boat Flotilla and the aircraft mother ship "Answald" were to be detached to the Baltic Sea. The commander of the 1st Squadron was to remain under the command of the High Seas Forces for the duration of this operation. In the interest of secrecy, the Forces were initially only moved to Kiel. "Brummer" was exchanged for "Frankfurt" a few days later, aircraft mother ship "Santa Elena" transferred to the North Sea.

After the ships-of-the-line were dispatched and the ship-of-the-line "Westfalen" was handed over to the inspectorate of ship artillery for training purposes, the number of battleships ready for use in the North Sea was small.

¹⁾ Operation "Keystone", see. Der Weltkrieg 1914-1918. Volume 13. Berlin 1942 ed. or Bundesarchiv. Frankfurt/M. 1956. P. 392 f. 323

Page 307 Limited readiness of the High Seas Fleet

The new Chief of the Fleet, Vice Admiral von Hipper, only had the following capital ships in the North Sea:

- From the 1st squadron "Helgoland", "Oldenburg", "Posen", of which "Oldenburg" had to be put on standby for many weeks from August 11 for annual repairs;
- From the IV Squadron "Kaiser", "König Albert", "Kaiserin", "Prince Regent Luitpold" and "Friedrich der Große", the latter dropped out as a combat force until September 24 due to yearly repairs.
- The III. Squadron, which was detached to Kiel for exercises until August 12, was fully operational with "König", "Bayern", "Großer Kurfürst", "Kronprinz Wilhelm" and "Markgraf".
- Of the battlecruisers of the 1st Reconnaissance Group, "Hindenburg", "Derfflinger", "Seydlitz", "Von der Tann" were ready for use; "Moltke" had shipyard repairs until the end of August.
- From August 24, the fleet flagship "Baden" was ready for action after repair work had been completed.

The readiness level of the torpedo boats was also poor at this time. The outpost service with 1½ Torpedo Boat Flotillas could only just be maintained.

At the same time as Vizeadmirals von Hipper was appointed Fleet Commander, Konteradmiral von Reuter became Commander of the Reconnaissance Forces. Immediately after these job changes, the B. d. A. carried out a reorganization. The previously the B. d. A. as "Head of Security" (L. d. S.) incumbent tasks were diverted and assigned to a special commander as Commander of Security of the North Sea (B. S. N.). Konteradmiral Zenker became the B. S. N.

On August 5, a submarine convoy was carried out for the first time on Route 500, which was released on August 3. By mid-August, 6 convoys with 7 U-boats had left along this route to the restricted area border. The frequent appearance of ships of the line and cruisers moving along Route 500 in heavy smoke to secure escorts gave rise to the expectation that the route would soon become known to the enemy. Another route, Route 750, was therefore soon tackled in the north. The new Route 750 was to be laid to reach the clear channel out of sight of the Dogger Bank North lightship. During work on Route 750 on August 9 at 11:17 p.m. during a night trip "M 62" (Lieutenant z. S. d. R. Schober) of the 5th Minesweeping Half-Flotilla (Kapitänleutnant Hoffmann) ran into a mine of barrier 64 and sank in 4 minutes) 8 non-commissioned officers and 9 men were killed. The group leader on "M 25", Oberleutnant z. S. d. R. Kaehlert, ordered the remaining boats to anchor to pick up the survivors. 30 survivors, including 1 seriously wounded, were taken on board by the launched dinghies, mainly from "M 60" (Oberleutnant z. S. Zechlin), who had anchored in Stromlee of the accident site.

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It can be assumed that all survivors were rescued. When it got light, the anchor was lifted and the return march started.

The work in the north had meant that, in addition to Barrier 64, other remains of older barriers were found in this area. The clean-up work, which started immediately, had to be broken off on August 11, because alarming events in the Terschelling area forced all minesweeping units to withdraw from the advanced work area. On the morning of August 11, in clear weather, wind N to SW, force 2 to 4, aircraft reconnaissance took place from all stations; "L 53" secured in the west, "L 56" in the north. At 6:29 a.m., aircraft "1829" (Vizefeldwebel Harten, flight maat Hulsen) reported from the Borkum seaplane station from its location between the island of Vlieland and the Terschelling Bank lightship that "many squadrons, course east, mid-range were in sight," a message that a few minutes later it was corrected that "several enemy squadrons, course east, middle speed, several enemy aircraft, course east, had been sighted". The fleet commander then ordered increased readiness at 7 a.m. The situation at 7 a.m. was as follows: 2nd and 3rd Minesweeping Flotillas were west of Hornsriff, covered by Von der Tann, Derfflinger, Frankfurt, Nuremberg and a torpedo boat half-flotilla The 13th and 14th Minesweeping Half-Flotilla worked west of Amrum, the outpost forces were 3 ships of the IV Squadron on Schillig Reede and the 18th Torpedo Boat Half-Flotilla on the Ems.

The first reports were followed at 9 a.m. by another from aircraft "1819" (Flugmaat Rumpelt, Flugobermaat Galts) that "between Ameland and Terschelling 6 enemy speedboats were sighted, first on an easterly course, then on a westerly course". Between 10 a.m. and 11 a.m. the flight commander reported to the High Seas Forces that the landing report from plane "1829" did not confirm the first report and that it was not about several "squadrons" but "destroyers".

The first report of sightings of strong formations led the Fleet Command to conclude that they intended to advance towards the mouth of the Ems. The report about the speedboats stationed near Ameland was interpreted to mean that the speedboats had advanced to cover airmen who were about to launch an air raid. Subsequent telephone reports that the speedboats had evidently been clearing mines again spoke for the systematic preparation of an advance.

However, the English intention was to send motor boats forward in the direction of the Ems estuary, regardless of the minefields, in order to attack minesweepers who could be reached there. At 10 p.m. on August 10, Rear Admiral Tyrwhitt had the 4 light cruisers "Curacoa", "Coventry", "Concord" and "Danae" with 13 destroyers, carrying 5 flying boats on lighters in support of 6 motor boats scheduled to attack, departed Harwich to be 25 nm northwest of Vlieland the next morning. According to British information, this second advance noticed by the German side was the fifth carried out since June. The approach point was reached shortly after 5 a.m. on August 11 and the motor boats were released towards Ameland. 325

Page 309 Airplanes versus English Schnellboote

The intended accompaniment by flying boats had to be canceled because they couldn't get up in the complete calm. Aircraft from Yarmouth, which were to join the formation, were in the sea area shortly after 6 a.m., but cooperation did not take place due to signaling failures.

From seaplane station Borkum Kampfstoffel V was with the planes "2525" (Leutnant d. R. Eichler, Flugmaat Christiansen), "2524" (Flugobermaat Schmidt, Flugz. Ob. Matrose Paul), "2529" (Flugmaat Heddäus, Flugz. Ob. Matrose Bartsch) and "1829" (Vizefeldwebel Harten, Flugmaat Hülsen) started on August 11 at 5:30 a.m. to the west for reconnaissance. At about 6:30 a.m. the formations reported by aircraft "1829" were sighted in the form of 4 ships with tripod masts and 8 destroyers; 2 nm to the north 3 destroyers, each with a flying boat in tow, were found; above the squadron was a tethered balloon, also on course ESE 6 Schnellboote Kampfstaffel V attacked the Schnellboote near Ameland with bombs and machine gun fire at 7 a.m. Immediately after the start of the battle, Kampfstaffel I from the Borkum seaplane base, which had departed west at 6:40 a.m., entered the battle, those on an easterly course first 6 motorboats moving in a dispersal closed up to increase the weapon effect and tried to defend themselves against the 9 attacking aircraft. The battle remained for half an hour without any visible result, then the motorboats gave up their advance and turned on the opposite course. Ameland Lighthouse was abeam at this time. On a westerly course things quickly turned in the enemy's favour. The planes, which repeatedly attacked from behind, had the sun behind them, they were now reinforced by the Kampfstaffel Norderney. This combat squadron with the aircraft "1759" (Scheuring, Schleburg), "2100" (Strachlendorf, Rustenbach), "2051" (Engelhardt, Lange), "2296" (Hammer, Fabian) and "2297" (Nagorsnick, Wohlfeil) was started at 7 a.m. after the enemy report. Attracted by the bombing of the aircraft in the fight, the combat squadron Norderney turned towards them and sighted the motorboat flotilla already lying in a closed formation on a westerly course. The squadron launched the attack, "1759" threw bombs at the motor boats from a height of 400 m, which apparently got confused and drove in disorder. The motor boats did not try to withstand the combined attack of the 14 aircraft, at 7:15 they were defeated; the planes met no resistance. The motorboats "40" and "41" had caused plane "2297" to crash with their last shots. During the attack on the right wing boat, this was pushed down 5 m; the attacked boat stopped and lay shrouded in clouds of steam. While turning, "2297" got caught in the machine gun fire of the next speedboat and fell in a torrent of water and disappeared; the crew was killed. Motorboat No. 41 was the only boat that could still move its engine, it managed to escape, until it was noticed by Dutch guard vehicles. Two motor boats were towed by Dutch torpedo boats and taken ashore, the rest sank in deep water. The commander of the forces in the reception position waited in vain for the return of the motor boats.³²⁶

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During the battle, aircraft "2051" was severely damaged by a machine gun hit in the radiator; the aircraft had more bullet holes in the carrying decks and had to be towed to the flight station after an emergency landing.

In response to the enemy report, the "L 53" (Korvettenplatän d. R. Prölß) standing in external security was close to the reported enemy forces. At around 10 a.m. the airship was attacked by enemy planes and from a great height at 138 K it was brought down in flames The crew, who had proved their worth on many raids, died with their commander.

Kampfstaffel IV of the Seeflugstation Borkum took off westwards at 10:25 a.m., sighted two of the disabled English Schnellboote being towed by a Dutch torpedo boat and attacked in 475 K to 474 K (¹) English light and heavy forces with bombs despite violent counteraction. Hits on a small torpedo boat and an armored cruiser were assumed to have been properly observed. Kampfstaffel VI and Kampfstaffel III also managed to establish contact with the English formation in the course of the afternoon. Of them, aircraft "2253" (Flugz. Ob. Matrose Elsner, Vizesteuermann Uhlig) attacked a destroyer with two bombs under heavy counteraction, one of which burst on the forecastle according to his observation. Kampfstaffel V took off for the second time at 4:10 p.m. and sighted it again English formation and attacked him from a height of 1500 m with violent counteraction with what appeared to be well-placed bombs.

The 18th Torpedo Boat Half-Flotilla (Kapitänleutnant Koehler) came across the reports about the enemy at 6:45 p.m. from the Ems. In 125 K the two English motor boats and two Dutch torpedo boats were spotted. All 4 vehicles were on Dutch territory; with a heavy heart, the paralyzed motor boats had to be refrained from being taken away. On the return march, both speedboats were found close to shore at a signal station on Terschelling Island. The 18th Torpedo Boat Half-Flotilla and other forces of the I. F. d. T. participated several times in the course of the day in helping their own aircraft. During the course of the evening, the enemy unit came into sight on a south-westerly course at 623 K. Since no more enemy naval forces were sighted by aerial reconnaissance in the neutral channel on the morning of August 12, the ordered increase in readiness was canceled and routine search work in the outskirts resumed.

On 13 August several minesweeping half-flotillas were working on Blue Route and its outward extension. The 3rd Minesweeping Half-Flotilla (on behalf of Oberleutnant z. S. Freiherr von Reznicek) had started clearing the remains of the old barrier 39 (see North Sea VI map 16), while "L 67" (mine helmsman Möbius) was clearing the buoys with the rudder heel on a mine. The detonation took place in the noncommissioned officer's room, the boat sagged aft immediately, lay on its side and after three minutes sank with the stern down. The crew was rescued by the half-flotilla's dinghies, 2 men were missing.

1) In the summer of	1918 a new square map	was introduced	l, until then the one
introduced at the beginning	of the war was valid (se	e. North Sea I M	Map 5). ³²⁷

Page 311 German mine barriers in front of Terschelling

The partly wrongly interpreted events of the 11. August — mine searches by motor boats under the Dutch coast — and news received by the Admiralty led the Fleet Command to take further security measures. British attacks against the bases of Flanders and the German Bight were a possibility. Due to the currently unfavorable material and personnel readiness of the High Seas Fleet due to the arrival of ships to the Baltic Sea, the large number of repair ships, and the large number of changes in commanders, staffs and commanders, special caution seemed necessary. The mouth of the Ems was considered the most likely target of an enemy attack and therefore the leader of the ll. Reconnaissance Group (Kommodore Harder) ordered the sea area north of Terschelling to be contaminated with mines as close as possible to the coast. The mine task was carried out as ordered during the night of August 21-22. Barriers 91, 92, 93 and 94 were cleared by the II Reconnaissance Group ("Königsberg", "Pillau", "Cöln", "Dresden") and the cruiser "Arkona" assigned to the task, with the support of the I Minesweeper flotilla (Korvettenkapitän Hermann, Kurt) and IV. Minesweeping Flotilla (Korvettenkapitän Krah, Walter; laid 720 mines outside Dutch territorial waters. Outpost boat "Nürnberg" of the Ems outpost flotilla was designed as a Markboot) it was anchored at 53° 28' N and 5° 17' E by two Dutch torpedo boats because of violation of sovereign waters after Terschelling. Careful observation of territorial waters was then made a special duty of all high-seas forces. A further contamination of the sea area under the Dutch coast, which followed Barriers 91 to 94, was carried out on September 6, 1918 by the 5th (Kapitänleutnant Hoffmann) and 8th minesweeping Half-Flotilla (Kapitänleutnant Tschirch) with 180 mines thrown immediately north of Ameland (Barrier 103 a - f). The Chief of the III. Minesweeping Flotilla (Kapitänleutnant Wolfram). It was the only time in the war that minesweepers laid a mine barrage. In preparation for the task, the 5th and 8th Minesweeping Half-Flotilla searched the approach route and the throwing field. During this work, the "M 41" assigned to the 6th Minesweeping Half-Flotilla (Obersteuermann Manneck) ran into a mine that detonated on the port side just behind the bridge. "M 41" sank after about 9 minutes, the survivors were rescued by dinghies from "M 65" (Leutnant z. S. Silei) and "M 60" (Oberleutnant z. S. Zechlin) and the motorboat of the 8th Half-Flotilla, which was sent to help after the first detonation. 3 men from "M 41" were missing. "M 41" ran into one of the German barricades thrown on August 21st and 22nd.

A few weeks after taking over the service as Fleet Commander, Admiral von Hipper assessed the general situation as improbable, but not impossible, for strong, heavy enemy forces to break into the sea area within the mine belt between Terschelling and Hornsriff. The enemy would have to use the same routes as the German Naval Forces to cross the belt; it was doubtful whether the enemy had kept open mine-free routes only known to him. The Fleet Commander, meanwhile, reckoned with the penetration of light enemy forces with the aim of a raid on Helgoland or the estuaries, especially the Ems. 328

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The chances of success of such a naval raid were thought particularly good on days when aerial reconnaissance was impossible for weather reasons, and on the nights following such days. The difficulties of navigation and mine protection, which were also increased for the enemy on these days, were not taken into account in this consideration; moreover, it is not apparent what decisive success the invading adversary should count on in this undertaking, which involved the greatest effort. Admiral von Hipper wanted to confront the invading enemy in the Ameland area/quad 83 K/quad 2884 IV Helgoland barrier without waiting for all battle-ready units of the fleet to gather, because this would be tantamount to abandoning defense altogether. Outpost forces and aircraft should contact, attack, and maintain contact. For the other High-Seas Forces to see, far-reaching aerial reconnaissance by airships and airplanes was provided as an essential prerequisite for gaining a picture of the location and behavior of the enemy main body outside the mine belt. The value of reconnaissance results from airships was not rated highly, since a complete overview of the sea area overrun could usually only be expected from altitudes below 1000 m. Days when a further overview could be gained from about 6000 m had to be counted, at 1500 m there were mostly clouds. Even when the sky was clear, vessels that were not exactly perpendicular to an airship could not generally be seen because of the haze over the water. There was therefore no guarantee that armed forces would be sighted at all from great heights. For naval combat, the afternoon hours were considered the most opportune time, so that the torpedo boat forces could come into their own and distressed ships could take advantage of the cover of darkness. Tactically favorable exploitation of the existing mine barrier should be sought. These considerations show how much the English attacking spirit was overestimated on the German side.

English mine activity against the German Bight had decreased sharply in the late summer of 1918: 3,096 live mines had been laid in full, compared with 1,033 in August and September and 1,504 in October. The increased mine operations in October were due to special circumstances. In the outer part of the mine belt, freedom of movement for friend and foe was always very limited. The fact that German protective barriers in the mine belt of the German Bight were successful for the first time and only once may have played a role in the restraint of the English. During a mining operation from August 1 to 2 by "Abdiel" with 8 destroyers, "Vehement" was the fourth boat in the keel line at 55° 33' N, 5° 24' E (196 K center) at 11:37 a.m. on August 1 on a mine. The hit was in the forecastle and detonated the ammunition chambers. The forecastle was torn off, the destroyer burned in the clear night, visible from afar. "Abdiel" towed "Vehement" over the stern. Shortly after midnight, the destroyer "Ariel" was hit by a mine, which completely tore off the forecastle. "Ariel" sank after 50 minutes. At 3:50 a.m. the salvage attempts were abandoned, "Vehement" abandoned and sunk.³²⁹

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The position of leader of the escort flotillas (F. d. G.) was created on September 1 to tighten the management of the escort service. The Chief of the Ems Coastal Protection Flotilla, who had previously been responsible for the escort service, was appointed Leader of the Escort Flotilla. As before, the U-boats were brought out of the mine area under escort and at the same time secured by powerful cover forces. Route 500 was primarily used, but the expansion of Route 750 was tackled as a reserve. The months of August and September were particularly affected by periods of bad weather, so that despite the associated disadvantages, the ship had to sail via the Baltic Sea, Kattegat and Skagerrak. Three days were lost due to the extended outward and return march, and when exiting the narrow waters the U-boats were more exposed to enemy U-boat attacks than in the North Sea. The danger of mines, which due to the length of this exit route could not be mitigated by fixed escorts, was also to be expected. Even if the Baltic route was not without its dangers, it was never seriously endangered until the end of the war. The B.d.U., Nevertheless always attached great importance to keeping shorter routes through the North Sea safely open and, if necessary, resorted to the detour. Incoming U-boats continued to consistently choose the Baltic Sea route (1).

In the meantime, the English warning area announced on May 1st in the northern North Sea between the Orkney Islands and Norway had become an effective mine endangered area. The Northern Barrage was laid between June and October 1918 with a total of 73,060 mines (2), of which 16,300 mines were English and 56,760 mines were American. Only a small section had already been laid on March 2, 11, 19 and 22, 1918 in the western section of the barrier by the English mine carrier "Paris". The completion of the Northern Barrage was prevented by the end of the war.

The implementation of these unusual mining operations was preceded by material, personnel and operational preparations. The difficulties here were not insignificant, since the sometimes very different views of the American and English navies had to be taken into account. In addition, the English view of the most appropriate implementation of the lock was subject to occasional fluctuations, because the views of the Admiralty and the Chief of the Grand Fleet did not always agree. The final execution of the venture therefore deviated from the original plan and bore the traits of a compromise not uncommon in coalition ventures.

In September 1917, the mines section of the United States Navy Weapons Office. Suggestion (3) made on April 15, 1917 for a barrier in the northern North Sea for the acceptance of the American proposal in principle at an inter-allied conference.

¹⁾ See p. 281.

²⁾ The mine counts from the various sources do not match exactly. According to a report from the USA, a total of 70,263, of which 56,611 were American mines, was given as the final number.

³⁾ See p. 282 f.³³⁰

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The United States Navy had taken on the brunt of the material and personnel preparations; However, it was just as unprepared as the English Navy for carrying out such a novel and extensive mine task. There was neither a suitable mine type nor minelayers and special personnel in sufficient numbers. It was clear from the outset that the English and American mine types in use, which were detonated by direct contact, were not suitable for the planned task. The primarily intended effect against submerged submarines would have required a number of mines to occupy the approximately 70 to 300 m deep sea area of around 280 nm that would have gone far beyond the practical possibilities. As a result, a special mine was developed that could be detonated by touching an antenna connected to the mine. This created an enlarged danger zone in which the submarines were endangered up to a distance of 30 m by the detonation pressure (1). The number of mines required was reduced by this construction to about a third compared to the use of contact mines. The unavoidable teething troubles that occur with every new development were consciously accepted and front-line tests under conditions that would have corresponded to those in the planned mine area were omitted in order to get large-scale production started as soon as possible.

For the shipping of the mines to England, 24 cargo ships were made available, converted and armed for the special purpose. Each ship transported about 2000 mines in dismantled condition with accessories. The transport from Norfolk or Halifax to the English bases took 65 to 70 days in a convoy from departure to reloading. Inverness and Invergordon were developed as bases in England. The first mine transports arriving on May 29th could be picked up properly in the bases prepared for all special work on the mines; Mine anchors and other mine materials had previously been transported to England. The only mine transport ship to be sunk by a German U-boat on April 11, 1918 was the steamer "Lake Moor" off Ireland. "Lake Moor" mainly had mine anchors on board.

As a minelayer, the US Navy only had the two mine ships "San Francisco" and "Baltimore", each with a capacity of 350 mines. With the planned delivery of 5,000 mines per week and the intention to carry out a mining operation per week, one of the first measures taken was the formation of an association of merchant ships suitable for laying mines, which could hold around 5,500 mines. The provision of so many cargo ships for transporting and laying mines was a painful intervention in the increasingly scarce merchant ship tonnage. In November and December 1917, 8 merchant ships were transferred to American shipyards and converted there for the intended purpose:

¹⁾ In the case of mines against surfaced submarines, the antennas were later shortened to about 10 m in length based on experience, in order to increase the detonation pressure with an effect that was sure to be devastating.³³¹

"The Northern Barrage"

- a) "Roanoke" (1), "Housatonic", "Canandaigua" and "Canonicus". Each ship was prepared for about 800 to 850 mines, speed about 14.5 nm.
- b) "Shawmut" and "Aroostook": each about 300 mines, speed 20 nm.
- c) "Quinnebaug" and "Saranac": each about 600 mines, speed 16.5 to 17 nm.

Delivery was severely delayed. Much of the delay was due to workers' lack of interest (2).

On April 12, 1918, "Roanoke" was the first ship to be completed with the conversion, equipment and test drives. Minelayers' Union" assembled in England. The last three ships arrived at Inverness and Invergordon at the end of June. The English Minelayers' Union consisted of four ships with a capacity of 1300 mines (3) and formed the 1st Minelayers' Unit; this was based on Dalmore and Inverness, Corpach and Loch Alsh were developed as bases for providing the mines.

Operational planning was initially aimed at laying out the barrier on the Aberdeen-Ekersund line. The American Operations Department saw certain advantages in this proposal, which the English Admiralty had agreed to when asked on October 23, 1917, compared to the Orkney-Nergen route, which was later mined at the English request. The changes demanded in December 1917 naturally also necessitated changes of a material nature as a result of the different water depths.

The British desire was primarily based on considerations to restrict the operational freedom of the Grand Fleet as little as possible. When Rear Admiral Strauss, who had been appointed commander of American mine operations in mid-February 1918, paid a visit to the Commander-in-Chief of the Grand Fleet, Admiral Beatty, at Scapa Flow on April 10, 1918, the English fleet commander's lack of enthusiasm for the largescale mine design in the northern North Sea and clearly expressed what he believed to be the restricted operational freedom of the Grand Fleet as a result. Although large parts of the barrier were initially supposed to consist of low-lying mines, which allegedly did not prevent surface forces from being run over, an incident had already occurred in March, which made Admiral Beatty's concerns seem understandable. In the small section laid by "Paris" to the west, the English sloop "Gaillardia" was lost as a result of a mine detonation, although the mines there were about 20 m deep. Further mine-laying was then initially halted. The safe functioning of the new antenna mine was in doubt, and it seemed more than questionable to Admiral Beatty whether the possible success would correspond to the great effort. Admiral Beatty rightly asked, "Are these mines safe enough for surface ships?"

¹⁾ The merchant ships were all given new names.

²⁾ The Northern Barrage and Other Mining Activities (Navy Department-Historical Section, Publication No. 2, p. 79).

³⁾ de Ronde: "Die Abriegelung der Nordsee" (Marineblad 1937. Issue 52). 332

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If that is not the case, then the plan to lay mines near the most important naval base is fundamentally wrong (1)." The Grand Fleet also felt the strain caused by the deployment of numerous patrol vehicles to push the U-boats underwater in the underwater restricted areas. It was understandable that the British Admiralty, and especially the British Fleet Commander, were not overly enthusiastic about the whole affair.

On April 20th, after a detailed investigation into the "Gaillardia" incident, the Admiralty agreed to continue the work. On June 8th, large-scale minelaying began: on this day, the English Minelayers Formation under Rear Admiral Clinton-Baker led for the first time in the eastern sector of the USA. -Formation in the central sector larger blockades. But these operations also revealed unpleasant weaknesses in the mines used. Patrol vehicles reported hearing numerous mine detonations in their patrol section—out of 3,385 mines, an estimated 150 had detonated. These self-ignitions, which at times went up to 19 per cent of the mines laid remained a constant concern of those responsible throughout the summer. Material improvements declined to 3 per cent in August, but spontaneous combustion was again recorded at 13 per cent in September.

These events upset Admiral Beatty. The spontaneous combustion weakened the effectiveness of the barrier; the antennae seemed too long, the mines too low for submarines passing over water, so that they caused only a certain shaking of the boat. It had become known that German U-boats which had passed the barrier on the surface had set off mines but had reached their home port with only minor damage. "He (Beatty) only agreed to the laying of this huge barrier outside the area of operations of the Grand Fleet because he was assured that no German U-boat would be able to cross this obstacle. He was disappointed to see the Grand Fleet's freedom of operation severely curtailed for a dubious advantage (2)."

Operations in the tactical context of British and American minelayers took place on September 1st and 30th. On September 1st, the American Rear Admiral Clinton-Baker was in supreme command. The last English operation was carried out on October 11th in the western part, the last American operation, which had been delayed by waiting for English security forces, was carried out on October 26th.

The security service for the individual companies was provided by destroyer units, which were secured by English or American combat forces.

It had been intended that the sections blocked only by low-lying mines would be constantly patrolled, similar to the low-lying Dover Strait roadblocks. In the long run, however, it was not possible to provide patrol vehicles for the large areas of the Northern Barrage, some of which were very far away from the bases; the patrol units planned for the Northern Formation (Northern patrol) had to be used for the direct protection of the convoys (3).

¹⁾ de Ronde: "Die Abriegelung der Nordsee" (Marineblad 1937. Hest 52).

²⁾ Newbolt V. p. 343.

³⁾ Newbolt V. p. 244 ff. 333

Page 317 Criticism of the ban and its outcome

As a result of this decision, which contradicted the original plan of the Northern Barrage, the entire extent of the Northern Barrage was blocked by shallow mines in order to endanger all submarines traveling on the water.

Blocking gaps were not planned. The only free passage led through a 10 nm wide fairway at the west end of the barrier. The eastern end of the lock extended to the Norwegian sovereign border. Here was a weak point that was the subject of much policy presentation to the Norwegian government. At the beginning of October, these finally led to the Norwegian government already preparing to close its territorial waters as an extension of the Northern Barrage at Utsire.

The barrier was divided into three sections, A, B and C, of which the western section (B) and the eastern section (C) was assigned to the English, the middle and largest section (A) to the American Minelayers Formation. Over time, the American minelayers also participated in the work in sections B and C. The water depths in section A were between 90 and 145 m, in section 8 between 77 and 175 m, in section d between 119 and 293 m. The large mine closure began to have an effect in September after the first submarine "U 86" was damaged on July 8 while passing section C on the homeward voyage, but was able to reach the home port unhindered. On August 12 "U 113" damaged during departure in section D and had to return to base. German losses in the Northern Barrage during September and October were probably 6 U-boats.

The sea area in which the Northern Barrage lay at the time of the Armistice was limited from Norwegian territorial waters to a distance of 10 nm from the Orkney Islands by the following points:

60° 0'N, 4°54¾.' E,	58° 50' N, 2° 27' W,
60° 21' N, 3° 10' E,	58° 50' N, 0° 50' W,
59° 20' N, 0°50'W,	59° 29' N, 3° 10' E,
59° 20' N, 2°5'W,	59° 12½ N, 4° 49' E

The area between 59° 8' N, 59° 25' N and west of 3° 10' E was declared by the Norwegian government to be closed to mines.

The breakthrough of the U-boats from the North Sea to their area of operations west of England and vice versa was severely hampered by the end of the war. The closure of the Dover Strait had become more or less effective. The breakthrough through the Pentland Firth was difficult because the guard there pushed the submarines under water and strong currents made underwater travel very difficult; to the north, the Northern Barrage made itself felt. The latter was particularly unpleasant because it was too far away from the German bases to carry out mine clearance work and to be able to secure the U-boats with escorts. 334

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What effective effect the Northern Barrage would have had on German U-boat warfare in the long run remains an open question.

The main responsibility for the safe, uninterrupted course of the U-boat war lay in the hands of the leader of the minesweepers (F. d. M), the leader of the escort flotillas (F. d. G.) and those subordinate to them and tirelessly on the job at sea flotillas. For the big ships—liners, battlecruisers, light cruisers—and the torpedo boat flotillas, securing the minesweeping and escort flotillas had become the primary task. The chiefs of these flotillas at sea were not only responsible for the proper technical handling of the minesweeping, but also very often, based on the weather assessment, they were responsible for the indirect decision on whether the cover forces were at sea. It was not always easy for the large ships to adapt to the frequently rapidly changing decisions of the above-mentioned subordinates, which had to be taken from the sea depending on the situation. Unnecessary sailing was often unavoidable, but had to be accepted in order to take advantage of every favorable hour for minesweeping. Any failure to do so outweighed the occasional unsuccessful departure of the cover forces. On the other hand, the frequent departures, the nocturnal movements and marches, mostly at high speeds, form a valuable constraint on the adaptability and mobility of the ship formations. Given the lack of combat experience, this only benefited the maintenance of sea habits and the ships' readiness for combat.

The fleet anchorage on the Amrum bank (1) completed in August did not stand the test of time; after the net was damaged by bad weather in September, it was cleared in October.

During periods of bad weather, the barrier breakers were used more frequently for inspection trips. As a result of a mix-up of barrels, barrier breaker "Wigbert" (Kapitänleutnant Berg) ran into a mine on its own Ems lock in the night of September 17/18: 1 deck officer, 1 non-commissioned officer and 3 men were killed. "Wigbert" was later towed.

The expanded U-boat program initiated by Admiral Scheer as Chief of the Admiralty had a severe impact on the fleet's personnel management. Officers and men, and in general also specialists and particularly good personnel, had to be given up from the ships, and the question of major decommissioning came up to the Fleet Command. In the context of considerations about these problems, which strongly affect the combat readiness and discipline of the Fleet, the Fleet Commander stated on September 24: "Keeping entry and exit routes clear for the submarines and protecting the bases in the North Sea and Baltic Sea is now the only task of the Fleet." Immediately after this factually correct, albeit strongly resigned statement, the naval strategic situation took on a new face as a result of the order to evacuate Flanders and the threatening possibility of a complete cessation of the U-boat war.

1) See p. 291 f.³³⁵

9. Flanders

(June until evacuation of Flanders)

The enemy's efforts to damage and possibly eliminate the Flanders submarine bases through air raids reached their peak in the summer of 1918. Almost daily, often in multiple waves, the enemy bombers attacked day and night, primarily Zeebrugge with its locks, the Bruges shipyard and Ostend.

At midnight on June 1st there was a heavy air raid on the Bruges shipyard and artillery depot by about 15 large English aircraft in groups of four. 19 bombs fell on the shipyard area. Torpedo repair shop, floating dock, crane, boiler house, several installations and workshops and a number of power, telephone, water, steam and compressed air lines were damaged. Business was generally maintained. 3 bombs inflicted moderate damage in the Artillery Depot. During the day the Zeebrugge lock and mole were bombed five times. A hit on the jetty damaged 1 aircraft heavily, 3 aircraft slightly. At 2:30 p.m. air raid on Bruges shipyard: aircraft were pushed back by fighter planes and anti-aircraft fire and dropped their bombs north-west of the city.

Further air raids against the naval bases took place over 24 days in June, with up to five or more air raids on individual days. The property damage done was generally minor. The actual naval warfare was only affected by the enemy's air offensive in the following cases:

- June 2nd: "V 73" and "G 41" of the III. Torpedo Boat Flotilla attacked by 2 enemy planes from low altitude west of Thornton Bank. No damage despite very close deflections from heavy bombs.
- June 5: From "A 39" of the Flanders torpedo boat flotilla, 2 men are killed and 9 seriously wounded when passing the head of the mole by the shrapnel effect of a bomb falling nearby. Boat insignificantly damaged by shrapnel.
- June 6: During the bombing raid on Bruges, 6 bombs were dropped in the northern branch canal. The torpedo boat "V 69" of the Z-Flottille Flanders lying there was damaged by explosives and detonation pressure: 3 bomb hits on the large submarine shelter bounced off the concrete ceiling without effect. The ceiling of the shelter held up very well, the "impressions created are hardly greater than a soup plate" (1).

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9. Flanders until the end of the war

Traffic was briefly interrupted by hits on railway facilities near Bruges.

12 June: "A 49" of the Flanders Torpedo Boat Flotilla is damaged on the forecastle in the Bruges shipyard by a bomb falling near the boat. A drinking water lighter sank as a result of a direct hit.

15 June: "V 82" of the Z-Flottille Flanders in the northern port of Bruges was slightly damaged by some splinters. Some of the bombs in the Zeebrugge harbor basin were in the immediate vicinity of the boats lying at the pier.

June 16: In the afternoon, the large floating dock in the Bruges shipyard is insignificantly damaged by splinters.

June 20 Z Flotilla Flanders is heavily attacked by enemy planes while working at sea; no damage.

June 27: Boats at sea are hit several times with bombs and machine-gun fire, but without success.

During a meeting with the Commanding General of the Air Force, the need to strengthen air defense of the naval installations in Flanders was pointed out. Anti-aircraft defense and kite protection had proved to be no longer sufficient in the critical situation. The demand to fight the enemy in the air with their own aircraft more than before and to attack them at their airfields was recognized and, depending on the available forces, remedial action was promised. Some of the anti-aircraft batteries requested by the Admiralty to protect the Bruges shipyard and the Zeebrugge and Ostend channel had been made available by the Admiralty from naval resources. At the request of the Marine Corps, the High Command had put together a bomb squadron in Vlisseghem in order to have it attack the enemy's ground organization and naval bases.

During this idea of an attack, attempts were made, as before, to damage the locks of the Flemish bases with artillery fire from the sea. At 1:45 p.m. on June 1, a monitor fired a shot into the water in front of Ostend Kurhaus, Batterie Deutschland returned the fire with observation by a balloon manned by Lieutenant Metzger. When the sixth shot was fired, a broad, dark plume of smoke could be observed, which indicated a hit on the monitor or on one of the smaller vehicles surrounding it. In the evening, torpedo boats found numerous wreckage nearby.

On June 9, monitors from the security guards fired at the pier and lock in Zeebrugge with 40 to 50 rounds of the heaviest caliber with aircraft observation. The installations in Zeebrugge were fogged up and the enemy, who was not visible because of the hazy weather, was fought by the shore batteries using sound measurement methods. Most of the enemy fire lay in the open, but a direct hit damaged the outer lock gate. The swimming chamber made water very slowly, the gate had to be replaced. The lock was unclear until June 30th. Accordingly, the naval forces depart and arrive via Ostend.³³⁷

Page 321 Skirmishes between security guards and clearing units

When monitors reported the shelling, two groups of 3 artillery and 3 anti-aircraft aircraft took off immediately. They sighted the foggy enemy on a south-west course with a total of 2 large and 1 small monitor, 8 destroyers, 4 paddle steamers and 9 speedboats. 3 boats of the Z-Flottille Flanders pushed after the retreating enemy and engaged in a long-distance firefight with some English destroyers. The enemy was heavily machine-gunned by fighter planes from 100 m.

Long-range reconnaissance flights took place over 20 days in June. They extended over the approach roads, the French bases of Dunkirk and Boulogne, the English south-east coast, the Thames area, the Channel to the coastal area of Suffolk and Norfolk, eastward to around Haak's lightship. The reconnaissance should seek to continuously determine noticeable changes, accumulations of ships in enemy bases, ships and ships at sea, newly laid mine barriers, convoy movements, etc. The long-distance reconnaissance, which was always ready for use, thus provided the indispensable basis for a correct assessment of the situation by the Flemish Marine Corps.

In May and June 1918 enemy mine activity picked up in front of the Flemish bases. Several major mine barriers were laid in the sea area north of Thornton Bank towards North Hinder and west of Hinder Bank. The Barrier 27 thrown on the 21st Mal 1918 with 240 mines was found on May 28th in 037 *beta*. The exact extent of the blockage to the west to 2° 57.5" E was recognized on June 2. On June 17, 18 and 20, numerous mines were observed by aircraft between Scheide and the Hinder Banks in clear weather; the report did not provide an exact navigational document, but it did show that English mining activity in front of the bases had intensified Route 3 was initially used, only one U-boat had to delay its departure by one day as a result of the change Barrier 26 was established on June 17, the eastern end at 3°8.5' E was correctly identified The usual battles between security guards and clearing units, as well as occasional air raids on the Flanders' forces at sea, could not prevent the majority of the mines in 037 *beta* (Barrier 27) had been cleared. Approaches by remote control boats to the blocking formation did not materialize for weather reasons.

During patrols on June 27, there were two battlefield encounters. Soon after midnight the 1. Torpedo Boot Half Flotilla Flanders (Kapitänleutnant Densch) north of Blankenberghe buoy was attacked by 6 Schnellboote without result. The German boats first dodged the attack, and then pursued the enemy; a hit was allegedly scored on one of the enemy boats. In the evening, the 1st Torpedo Boat Half-Flotilla guarded Flanders, secured by the 5th Torpedo Boat Half-Flotilla (Kapitänleutnant Karlowa) route A. After the security guard came into sight, an English lead ship and 3 destroyers attacked the Aboats. 338

9. Flanders until the end of the war

The boats rallied to the 5th Torpedo Boat Half-Flotilla; From 6:55 p.m. to 7:15 p.m., both half-flotillas engaged in ongoing combat along the network barrier at distances of between 124 and 76 hm. After 20 minutes, the enemy turned away at high speed under fog after it was believed that the first and third destroyers had been hit.

At 4:30 p.m. on July 7, land-based surveillance established the perimeter and an American motorboat, which had lost its way in search of a downed aircraft, was fired upon by the coastal section's SK batteries 4,000 m north of Nieuport Mole. After the sixth shot, the 6-man crew jumped overboard, the boat itself began to sink and was sunk under fire from the Aachen and Reimers batteries. 2 Americans were captured, the rest died as a result of artillery hits.

The mine clearance work under the coast did not produce any particular surprises in July either. On August 8, however, events occurred in the mine warfare that created a new and completely opaque situation on outlet Route B, in the so-called Schooneveld (855 K). While the 2nd Torpedo Boat Half-Flotilla was clearing mines, "V 68" (Oberleutnant z. S. Beckurts) of the 1st Destroyer Half-Flotilla, which was responsible for securing, received a mine hit at around 3 p.m. in the height of the aft engine. "V 68" sank about 5 minutes after detonation. The crew floating in the water was taken over by "S 61" (Kapitänleutnant Keil), "S 63" (Kapitänleutnant Loeffler, Walther) and "V 47" (Kapitänleutnant Gerß) led by "G 95" (Lieutenant Captain Pieper, Ehrenreich). Losses were 18 dead and 24 wounded, most of them seriously. During the salvage work, another mine detonated near "G 95" of the 1st Destroyer Half-Flotilla). The scene of the accident remained unsuccessful on this day and the next.

On August 11, "G 41" (Kapitänleutnant Frorath) of the 5th Torpedo Boat Half-Flotilla was hit aft by a mine in the same sea area on the port side. 3 men were injured slightly and 4 seriously. The boat remained buoyant and was towed in practical result. No mines could be found even with low-level devices and chain search devices. The assumption was that these must be ground mines, which were detonated by remote detonation - magneto or noise detonation. The mine detection work on these days was naturally particularly lively in the area in question were often hampered by heavy air raids.

On August 15, the lead boat of the 1st Torpedo Boat Half-Flotilla Flanders, "A 58" (Kapitänleutnant Mensch), ran into a mine at 855 K. The boat was underpinned and towed in, but broke apart 1 nm north of the Zeebrugge mole and sank. The loss was 3 killed and 22 wounded.

On August 16, the 1st Mine Sweeping Division (Kapitänleutnant Zürn) again found no mines when searching with bottom trawl nets. When marching back, the Leader's vehicle of the F. d. U. Flanders, trawler "Frigg", hit in 855 K on a mine; loss 1 dead, 2 wounded. 339

Losses from mines

The trawler "Frigg" sank while being towed on the Droogte van Schooneveld. The circumstances surrounding the mine detonation that killed the trawler "Frigg" seemed to confirm the assumption that bottom mines with magneto ignition were to be regarded as the cause of the last frequent mine losses in 855 K.

Soon after the first suspicions that these were new types of mines with magneto ignition, every effort was made to approach the very difficult problem of clearing such mines. From mid-August on, the U-boats, which were hampered primarily by the uncertainty of the situation, had to be escorted to and from the port by torpedo boats with search equipment. Fortunately, apart from the contamination found in 855 K, there were no disturbances on the other routes. In any case, it was worrying that in a sea area that had been searched for mines with every means available, several torpedo boats and a trawler had been sunk by explosives that had not yet been detected. The technical tests initiated to combat the new type of mine were unsuccessful. By the time Flanders was evacuated, no antidote to the new threat of mines had been found. The month of September is also characterized by long periods of bad weather, which often ruled out even routine clearing work.

Enemy mine activity in August 1918 off the coast of Flanders was limited to laying Barrier 56 in the Schooneveld with 234 mines on August 8 and Barrier 28/29 on August 22 with 198 mines. The last mine barriers were Barrier 45 at Hinder with 40 mines on September 6, Barrier 95 on September 18 south of Wenduyne Bank with 8 mines. An effective hindrance to the departure and arrival of the U-boats from the Flemish bases was not achieved.

During the summer months leading up to the evacuation of Flanders, occasional gunfire from sea and land had little practical result: on July 19 enemy monitors shelled the coast; after 10 shots from the Tirpitz battery they moved away on a changing course. On July 26, a brief artillery engagement took place between an enemy Monitor shelling the coast and Battery Pommern. On July 29, around 4:00 p.m., battery Tirpitz was hit by enemy shore batteries with 10 rounds of the heaviest caliber and was covered in smoke. An hour later a monitor fired 9 rounds at Ostende at long range. The impacts were near the station without causing any military damage to property; 6 military personnel were killed and wounded, and there were casualties among the residents. The shore batteries returned fire; the enemy then moved away. At about 2 p.m. on 8 August, the Deutschland Battery fired on a sighted monitor that was moving away. On the morning of September 16, Tirpitz Battery fired 105 rounds with good effect on Nieuport Bad. The counteraction of 40 rounds of medium caliber was unsuccessful. On the afternoon of September 27, Pommern Battery was fired upon with 16 rounds. On September 28, Zeebrugge was shelled from 1:30 a.m. to 2:05 a.m. 40 shots were fired, which did no damage.

9. Flanders until the end of the war

Immediately at the same time, the coastal batteries west of Ostend were bombarded for about an hour from sea and land. The fire was returned by batteries from the east and west sectors. During the day from 5 a.m. monitors intermittently fired on the battery area of the western sector and rear connections of the II. Marine Division. Battery Tirpitz was under heavy fire from land all day long. The base of a gun was damaged. The enemy stopped firing at 4:30 p.m. On September 29, the rear area of the II. Marine Division was again fired upon without effect by monitors. Between 5 p.m. and 6 p.m., 6 shots of the heaviest caliber were fired at the Ostend docks.

Because of the ongoing tasks to keep the exit and entry routes open, larger operations by the naval forces were rare in the last period of the war. In the night of August 22nd to 23rd, around midnight, 8 Schnellboote of the Motorboots-Division Flanders ran in two groups from Blankenberghe to Dunkirk Roads to attack naval forces lying at anchor there. It was a very bright and clear full moon night, wind W force up to 3, swell 1, moon in the south. The operation and the first group with the boats "LM 9", "LM 15", "LM 17", "LM 18" were led by Kapitänleutnant Aßmann; this group was to hold east of Dunkirk. The second group, under the command of the Flanders motorboat division (Kapitänleutnant d. S. II Ellendt) with the boats "LM 7", "LM 8", "LM 10" and "LM 16" was to be deployed west of Dunkirk. "LM 10" turned back immediately because of engine breakdown, the second group carried out the operation with three boats. 5 destroyers of the Z-Flotilla Flanders were in position to take up position. The eastern group encountered the enemy, who was moving at high speed, earlier than expected. All boats fired their torpedoes; it was believed to have recognized cruisers and torpedo boats and to have caused one torpedo boat to sink. When the first torpedo shot was fired, the enemy opened heavy defensive fire and chased the S-boats. The western group advanced to about 3 nm on the coast and sighted to the east about 3 nm from 3 destroyers. The group encountered the enemy, who recognized the attack at a distance of about 500 m and turned towards the speedboats at high speed. The command boat did not get a shot because an enemy torpedo boat turned towards the speedboat after repeated attacks. The two following boats fired torpedoes and reported sinking one destroyer and badly damaging another.

The French torpedo boats "Obusier" and "321" (1) were in Dunkirk Roads that night. Both evaded several German torpedoes and in turn believed to have hit at least one Schnellboot with their lively fire. The English monitor "Terror" lying in the roadstead also took part in the shooting. The enemy did not suffer any losses. The torpedo detonations observed by the Germans may be due to the fact that torpedoes detonated on the sandbanks. The German speedboats returned with only minor damage and without Personnel losses returned to Blankenberahe.

¹⁾ Thomozi. "La Guerre Navale", volume I, p. 218.341

Page 325 Reinforced British anti-submarine defenses in Channel

On September 16, enemy Schnellboote unsuccessfully attacked the 6th Torpedo Boat Half-Flotilla and the 1st Torpedo Boat Half-Flotilla Flanders during the night of the U-boat escort.

The enemy's measures to combat the German U-boats in the narrows of the English Channel had become much more effective over the past few months. On September 6, the Commander of the U-boats, Korvettenkapitän Bartenbach, stated that the passage through the Dover Strait had recently presented the U-boats with great difficulties. Deep mines still allowed surface vessels with a draft of 8 to 12 m to pass. The submarines breaking through the channel narrows were pushed under water at night by a swarm of destroyers, trawlers and motor boats using light barriers. Since August 1st, only one of seven U-boats expected to return through the Strait of Dover had entered Flanders without incident. The Flanders U-boats were therefore instructed to visit the area of activity at the western exit of the channel and in the Bay of Biscay on the way north around England. This assessment of the situation remained in place until the Flanders front was dismantled and the Flanders submarines returned home. Reconnaissance flights into the Dover-Calais road confirmed the correctness of F. d. U. Flanders. The Marine Corps believed that conditions could be improved by attacks from surface forces. The only way the enemy could have been forced to give up their guard was to make repeated advances. However, the small number of advance forces available was not sufficient for sustained operations against the channel blockades. The large torpedo boats of the F.d. T. Flanders had recently experienced many failures and major changes in commanders. The F. d. T. Flanders, in agreement with the commanding Admiral Flanders, therefore considered it necessary that the new formations and commanders first be given the opportunity to familiarize themselves with light combat tasks, such as advances into the Hoofden, before they tackle such difficult tasks as attacks in the English coastal area. The extent to which the torpedo motor boats were suitable for disrupting the guards in the Dover Strait was not yet certain, since these boats had not yet been fully tested technically and seamanlike.

Heavy enemy air raids on Bruges, Zeebrugge and Ostend took place over 22 days in July. There was only insignificant military damage. Because of the increasing danger from planes, it was ordered that part of the workshops and storehouses of the Bruges shipyard should be relocated to conveniently located and well-protected buildings in and outside the city of Bruges. The loss of tents, which was undoubtedly to be expected as a result of this fragmentation of the facilities, was accepted, as was the inevitable increase in the necessary means of transport on water and land. The proposed relocation of the torpedo repair shop was dropped, but it was ordered that a bombproof partial repair shop should be built as a kind of reserve outside the shipyard on the east bank of the channel.

Dunkirk and enemy airfields and camps were repeatedly bombed during the months of July, August and September.³⁴²

Flanders until the end of the war

Events in the naval air war from July 1, 1918 to the end of the war

- 2 July: Two formations of about 10 de Havillands attack Bruges shipyard at 12:20 and 15:50 with a total of about 40 bombs. "UB 88" and "UB 110" are slightly damaged. Minor damage to property at the shipyard. Dock II. 1 pump dredger and 3 boats of the mine clearance division negligibly damaged by splinters.
- 4 July: At 5.05 p.m. 4 monoplane seaplanes attack 169 *alpha* eastbound Curtiss boats. After a quarter-hour chase, a flying boat lands in 135 *alpha* with the starboard engine on fire. The second opponent is forced to make an emergency landing in 102 *alpha* with the engine stopped. The third boat escapes badly damaged. Subsequent reconnaissance found at 9 p.m. 4 enemy destroyers in 166 and 167 *alpha*, with debris from an aircraft floating nearby.

Chase flight of a chain of 6 Seafront single seaters sighted around 4:30 pm near Nieuport 3 Havillands. In the course of the pursuit, 15 enemy single-seaters attack from behind. After a fierce fight, the pilot aircraft (Lieutenant z. S. Lodemann) crashed near Ypres. A second of our planes makes an emergency landing in the Thourhout area. Occupants unharmed.

- July 6: During a long-distance flight to the Thames estuary, a squadron from the Flanders I seaplane station, led by Oberleutnant d. R. Christiansen at 11:45 a.m. in 132 *beta* the English submarine "C 25" and attacks it by surprise. The crew on deck is killed or wounded with machine guns Hit on the still protruding stern apparently so badly damaged that it reappears It is now pounded at point-blank range with over 5000 rounds for about 30 minutes, killing the commander, who is firing a carbine from the turret The boat lies motionless in a large oil stain. A second squadron, led by Lieutenant d. R. Becht, immediately starts, which finds "C 25" being towed by the submarine "E 51". Both submarines are again bombed and MG attacked and scored hits on "C 25". A little later, Christiansen Squadron, which has risen a second time, observes at the same place how destroyers are trying to tow away the apparently damaged "E 51", while "C 25" is still lying motionless in the oil stain. Neither submarine was lost.
- July 11: A French plane was hit by flak and machine guns at 8:00 a.m. forced to make an emergency landing in the Aachen battery. The crew are taken prisoner.
- July 16: The Marine Fighter Group achieves its 100th aerial victory.
- July 22: On long-range reconnaissance flights to NNW and to Dunkirk, our planes have dogfights twice with de Havillands. Plane "2029" has to make an emergency landing in front of Ostend. Plane capsizes later. Crew is rescued.
- July 29 On reconnaissance flights at 7:30 p.m. skirmish with 2 de Havillands. In the course of the battle, plane "2513" (Oberleutnant z. S. Koch) crashes and is smashed. The crew is no longer seen.
- July 31: During a strong attack by 19 enemy aircraft on the Bruges shipyard in the morning, the turret, rear barrels and central gun of "V 70" are damaged by splinters. A reconnaissance squadron under Oberleutnant d. R. Christiansen sighted an older armored cruiser secured by 2 aircraft off Lowestoft in the evening. 343

Air raids on the Flanders bases

The planes are attacked, one of them, a Curtiss boat, crashes in flames after the first attempt, the armored cruiser fires at the squadron with a heavy caliber without result. In the evening, the minesweepers' security planes are attacked by enemy planes. In the course of the battle, 2 of your own planes are shot down, a third has to make an emergency landing. 3 crewmen are rescued, some of them wounded. During the salvage work, our boats are unsuccessfully bombed.

- August 10: An enemy plane is shot down by flak and MG. near Ostend.
- August 11: Flak brings down an enemy plane in flames near Zeebrugge. An enemy aircraft forced to make an emergency landing by flak at Nieuport Mole is destroyed by earth artillery.
- August 12: around noon, <u>Vizeflugmeister</u> Thöne manages to bring down one of the Sopwith single-seaters protecting a bomb squadron. Around noon, 6 planes take off to cover a bomb squadron approaching Bruges. 1 de Havilland takes off to sea under cover of a Sopwith single seater. Both are shot down by Leutnant zur See Sachsenberg. In addition, Lieutenant Spies and <u>Flugmaat</u> Karries together and Oberleutnant Kahler and Flight Obermaat Hublich each shot down an enemy.
- August 14th: During fighter flights by the Navy Fighter Group on enemy squadrons coming from Bruges, one of their own planes crashes. At the same time, Lieutenant Bastian and Flugmaat Hakkebusch each shoot down a Sopwith.
- August 16: Lieutenant z. S. Sachsenberg shoots down 2 enemy planes from a bomb squadron departing from Bruges. Lieutenant Osterkamp forces an enemy to land at sea. Another enemy plane is damaged by flak and has to go down in Holland.
- August 18: A bomber plane is forced to make an emergency landing in Ostend by flak. The crew, English officers, are taken prisoner.
- August 19: Flak and MG. hits attacking enemy aircraft forced to make an emergency landing. The crew, English, are captured.
- August 21 Anti-aircraft batteries shoot down a large British bomber which crashes at sea.
- August 24: 1 de Havilland forced to make an emergency landing by flak hits.
- August 25: Bruges shipyard is first firebombed during night raids.
- August 27: During a bomb attack on the Zeebrugge canal "in ammunition" sheds with 38 cm cartridges are blown up.
- August 29th: During the bombing raid on Bruges, "S 53" was slightly damaged in the shipyard by splinters at the bow. "G 91" suffered several damage at the stern, floating dock III slightly damaged, I motor boat sank. 1 motor boat and I steamer damaged. 3m artillery depot Steenbrügge 3 ammunition sheds badly damaged.
- August 30: Boats from the minesweeping half-flotilla are repeatedly attacked by enemy planes with heavy depth charges during a patrol from Ostend to Zeebrugge. "A 9" suffers major damage.
- September 3: 1 enemy aircraft is hit by flak and has to make an emergency landing at Blankenberghe.
- September 15: Outgoing torpedo boats are attacked by enemy planes with bombs without result. 344

9. Flanders until the end of the war

September 17: Reconnaissance flights in the English Channel reveal strong searchlight signals at Folkestone and Gris Nez. Folkestone and 5 nm south of Gris Nez 5 small vessels, each with 2 headlights that shine in opposite directions. The cones of light from the 10 headlights form a zigzag line. Southwest of it a magnesium barrier. Strong magnesium fires burn on 4 of the approximately 2000 t steamers. Planes attack the steamers with bombs and machine guns. and return undamaged despite being counteracted by flak.

September 24: Lieutenant Wilhelm crashes a Sopwith while chasing attacking bomb squadrons. Lieutenant Achilles forces an enemy to land.

The naval fighter units and anti-aircraft batteries were also an essential part of Flanders' air defense in the last period of the war. In numerous cases their combat activity was already successful because approaching bomb formations were pushed back prematurely by anti-aircraft fire and the appearance of fighter formations. The attackers then often threw their bombs into the sea or into open terrain. Coastal dogfights often benefited naval warfare and land warfare alike, whether they were at sea or over land. In most cases it cannot be decided to what extent shooting down by naval fighter pilots and anti-aircraft guns was of greater importance for sea warfare or land warfare. The excellent combat performance of the above units was, on the whole, an indispensable part of the sea-going activities of the Marine Corps and its armed forces. The immediate securing of the bases on the Flanders coast, which were indispensable for naval warfare, was largely due to the tireless operational readiness of naval fighter units and anti-aircraft guns.

The number of naval fighter pilots and anti-aircraft guns shot down was considerable given the increased activity in June 1918 airspace until the end of the war. Kills and combat-forced forced landings behind friendly lines or in Holland were achieved:

by naval fighter pilots 32, by Flak 6, in June by naval fighter pilot 20, by Flak 2, in July by naval fighter pilots 21, by Flak 8, in August by Naval fighter pilots 39, by Flak 13, in September in October

(from the 1st to the 17th) by naval fighter pilots 16, by Flak 2.

From the beginning of June to the end of the war, Lieutenant Osterkamp scored 18 and Lieutenant z. S. Sachsenberg 13 aerial victories. Furthermore, Vizeflugmeister d. R. Zenzes, Vizeflugmeister Gerth, Lieutenant Poß, Vizeflugmeister d. R. Thöne and Lieutenant Achilles were particularly successful as fighter pilots in the coastal area during this period of the war.³⁴⁵

10. The End of the War in the North Sea

After the resignation of Chancellor Count Hertling, Prince Max of Baden was appointed Chancellor on October 3. On the night of October 3rd and 4th a peace note was sent to Washington asking President Wilson to take charge of the establishment of peace and to bring about the immediate conclusion of an armistice by land, sea and air. As a basis for the negotiations, Wilson's 14 points from the congress message of January 8, 1918 were accepted.

The combined attack of the Belgians, French and English in Flanders was carried out under the orders of the Belgian king. The German 4th Army under General Gixt von Armin tried to prevent the breakthrough, but was gradually pushed back in the Ypres area until the beginning of October. The Flemish submarine base was in danger.

Since September 28, Admiral Scheer, too, has been convinced that peace must now be made. On September 29 he was informed by General Ludendorff that the evacuation of Flanders had to be prepared because the army could no longer guarantee possession of Flanders. According to General Ludendorff, the situation was now becoming serious, also with regard to the great hopes placed in the intensified U-boat construction program. As late as September 21, the O.H.L. had promised that about 40,000 workers would be made available for November to carry out the large submarine program if the situation on the western front permitted this and the preliminary discussion planned with representatives of the industry made it appear possible that the program could be fulfilled. On September 22, the Kaiser had declared his agreement on all points with the implementation of the large submarine program. Now, on September 29, General Ludendorff stated that the Navy could not count on the withdrawal of a single man from the front; however, the submarine program was to be maintained as a means of exerting political pressure until an armistice and acceptable peace conditions were secured. At a meeting given by Admiral Scheer on September 29th, immediately after the opening of the O.H.L., the Kaiser gave authorization for the evacuation work in Flanders, particularly at the Bruges shipyard. In execution of the instruction received, Admiral Scheer issued the following order:³⁴⁶

10. The end of the war in the North Sea

- 1. Flanders is to be abandoned as a U-boat base and evacuated as planned.
- 2. The gradual evacuation of Flanders by O.H.L. must be reckoned with.
- 3. The evacuation of Antwerp is not intended for the time being.

This order, which was given on the evening of September 29, had to be supplemented late in the evening by another order from Admiral Scheer: "The situation in Flanders now requires accelerated dismantling of the submarine base, as there is no time available for planned evacuation." This order was supplemented on September 30 at noon by a telephone conversation between Captain z. S. Levetzow and Konteradmiral von Trotha to the effect that the Naval War Staff expected an increased state of readiness of the High Seas Fleet, without any change in the behavior of the Fleet compared to the hitherto practiced.

The question of evacuating the Flanders positions had already been discussed with the Commanding Admiral of the Marine Corps on September 16th and 17th during Admiral Scheer's visit to Flanders. It had been ascertained that a second position near Ostend and a third position in the rear had been prepared, but taking them would mean that Zeebrugge and Bruges would come under enemy fire and that the naval warfare from Flanders would end. At least 8 days were assumed to be the time required for the evacuation, whereby salvaging all the material was ruled out. During a discussion between the Chief of the Admiralty and the Chief of the General Staff of the Field Army on the question of evacuating the Flanders positions on September 18, the following was established:

- 1. The war situation may make it necessary to evacuate the Flemish position. This would require the abandonment of submarine warfare from the Flanders coast.
- 2. This would severely damage the submarine warfare, since the importance of Flanders rests not least on the relief that the extremely efficient repair shipyards run by the military bring to the home bases.
- 3. A dismantling of the Flanders submarine base would mean a corresponding damage to the submarine warfare.
- 4. The planned evacuation of the Flemish submarine bases, for which the Navy has made provisions, would take 8 to 14 days.
- 5. Since the O.H.L. cannot guarantee this period of time, the S.K.L. assumes the risk of losing valuable boat and shipyard material in the interest of continuing the submarine warfare from Flanders for as long as possible, which is to be expected in the event of a quick evacuation got to.

The situation on the land front near Ypres and Dixmuiden had meanwhile deteriorated to such an extent that the Commanding Admiral of the Marine Ccorps had already decided at around 7:30 p.m. "V 71", "V 81", "G 91", "S 54", "A 80" and "A 59" to be sent to the German Bight on the same evening. 347

Page 331 Repatriation of the Flanders torpedo boats

All other large torpedo boats in Flanders which, according to their state of readiness, could be considered for a transfer, were ordered to prepare themselves for marching at an accelerated rate and to gather in the port of Zeebrugge outside the locks. The decision to send the A-II boats home was still reserved, since their return march was a certain risk due to their low speed. The further development of the situation off the coast had to be decisive for this. If the enemy advanced further from Ypres and Dixmuiden, it was to be expected that the enemy would do everything possible to prevent the departure of the Flanders naval forces at the last moment, namely by guard forces and mines off the coast, and above all by damaging the Locks in Ostend and Zeebrugge by sustained shelling from the sea or by air raids. The F.d. U. received the order to speed up all possible U-boats, none of which were ready to leave at the time, or ready for transfer.

The A.O.K. 4 requested the Marine Corps to be particularly careful in aerial reconnaissance for the English ports, in view of the repeated reports of imminent landing attacks against Flanders. Depending on the weather, reconnaissance for the English coast was pursued with all vigour. In contrast to these reports from the agents, which could not be reconciled with the previous reconnaissance reports from the aircraft, Admiral von Schroeder did not rule out that preparations for a landing operation were in progress, but he still believed that a landing would be carried out unlikely, for the durability of the coast was crucial to the possibility of a large landing. In its present state, the coast was able to withstand any naval or landing attempt. In the opinion of the General Command, the war situation indicated that the enemy was systematically striving to destroy the coastal front from the rear.

The first order for the dismantling of Flanders was issued on the morning of September 30th. The main task was to transfer as many swimming forces as possible home. The second task was seen in the salvage of valuable material and the third task in the destruction of all such facilities and objects that were not worth removing and could not be removed. The coast had to remain ready for action until the last moment, in order to prevent the enemy from breaking into the flank and to cover the withdrawal of the land front. The first submarines left the German Bight on September 30th. The boats of the minesweeper half-flotilla (A-I boats) went to Antwerp on the canal route to be blown up there when Antwerp was abandoned. After they had given up their mine work and patrols, minesweeping boats were used as towing boats on the canals. Like the motor torpedo boats, they were later to be taken home by train from Antwerp. The seaplanes from Seeflugstations I and II were to fly to Germany as soon as the weather conditions permitted. Insofar as aircraft were used for artillery observation, they had to perform this service as long as the coast was held.

Page 332 10. The End of the War in the North Sea.

The Ostend shipyard ceased operations on the afternoon of September 30th. On October 1st the Naval War Staff announced that the O.H.L. had abandoned her initial plan to hold Antwerp for a long period. Antwerp was only to be expected for about 8 days. Initially, this notification did not change the plan to carry out the transports and the transfer of boats by water to Antwerp, since the loading of the barge was progressing well and empty trains were hardly available.

The shelling of the coast (1) carried out by the enemy in the last days of September continued in the following days. On October 1, 4 monitors shelled Middelkerke without effect. The Pomeranian and Western Batteries were fired on from heavy artillery towards evening. One gun each was damaged in the Aachen and Antwerp batteries. Battery Pommern fired 16 shots at Dunkirk on the morning of October 1, at 7 p.m. at Cesen, in the evening 15 shrapnel on the enemy's approach routes. Batteries Deutschland, Tirpitz and Westbatterien also fired at targets on the land front in the morning and afternoon of October 1st. An approaching monitor was turned away by brief shelling from Battery Pommern on 2 October. Shelling of the Tirpitz and Pommern batteries from land on October 2nd was answered by fire from the Deutschland battery. Also on October 3rd, Batterie Tirpitz and Germany fired at sea and land. The Tirpitz and Pommern batteries were fired on that day by heavy artillery from land. Around noon on October 4th, Batterie Deutschland fired 13 high-explosive grenades at the Nieuport-Bad lock with aircraft observation and destroyed the lock systems with 4 hits. Ebb and flow now had unhindered access to the Yser.

In the following days, too, there was brief firing by the shore batteries. On October 8, Battery Pommern became unusable for 24 hours as a result of shelling from the sea. On October 14, after a break of several days, monitors fired on the batteries in the western sector, which also received heavy fire from the land side. The batteries returned fire. On October 15, the western batteries were shelled from land without military damage, during the day monitors fired at land targets in the Westende Bad area. Battery Pommern came under heavy fire from heavy railway guns without damage and returned fire. These were the last actions of the Flanders Coastal Batteries.

Own and enemy air activity was low in October due to the weather.

On September 30, 1918, the O.H.L. informed the S.K.L. that the army groups between the coast and the Argonne Forest - Army Group Kronprinz Rupprecht, von Boehn and Deutscher Kronprinz - had been informed that they no longer had to count on reserves from the O.H.L. The Army Groups were instructed, evading excessive enemy pressure, to take and hold a line in mutual contact which ran south through Bruges via Tournai, Valenciennes, Le Cateau, south of Marle, Rethel and south of Dun.

1) See p. 323 f. ³⁴⁹

Page 333 Evacuation of Flemish bases

The O.H.L. wanted the preparations and later destruction in Flanders to be carried out in conjunction with the Navy, with the O.H.L. immediately notifying the Marine Corps. The line Antwerp, Brussels, Nivelle, Chatelet, Givet, Charleville, south of Dun, was envisaged as the second line.

The line Handzume - Roulers - Werwick could be held in the 4th Army's area. On October 4, the locks at Ostend were blown up, dredger barges were sunk in the lock chambers and the beacons were knocked down. The destruction of the shippard in Bruges was carried out as planned, as a last measure on October 16 the Zeebrugge lock system and the Bruges FT station were rendered unusable. By October 3, 1918, 11 large torpedo boats, 13 A-boats, 7 U-boats and 33 seaplanes had left Flanders and been placed under the command of the High Seas Forces. The large torpedo boats "V 47", "S 61", "V 67", "V 69", "V 77" were blown up in Flanders on November 2nd, "UB 10" and "UB 40" on November 5th. October sunk off Zeebrugge, "UB 59" blown up on the same day. The transfer of these torpedo boats and submarines home was not possible due to a lack of operational readiness. By early November, all of the Marine Corps submarines and large torpedo boats had either returned home or been wrecked in Flanders. The torpedo boats "A 4", "A 5", "A 8", "A 9", "A 11", "A 14", "A 16", "A 30", "A 40", "A 42". ", "A 43", "A 47" as well as 12 express boats and 12 motor boats were left behind because the return home was no longer possible for material or military reasons. Further express boats were brought to Antwerp on the canal route and to Antwerp by train Kiel was sent. Ten 28 cm railway guns on the sea front, which had to remain ready for use, were blown up in the last hour. Large parts of the anti-aircraft guns fell to the army. A third was used to reinforce air defenses in the North Sea.

Ostend's shipyard and port facilities were rendered completely unusable. In Bruges and Zeebrugge the destruction of the locks of the Zeebrugge-Bruges-Ghent canal and the contamination of the waters with mines ended on October 15th and 16th. The material was transported partly by canal via Antwerp and partly by rail.

The front section west of Ostend was cleared on the night of October 16, and the section west of the Zeebrugge-Bruges line on the night of October 17-18. The Marine Corps of the land front came after the clearance of the coast with two marine divisions as an army formation under the A.O.K. 4. All land aircraft of the Marine Corps remained with the rest of the Marine Corps. It was agreed, however, that the Navy could fall back on this formation at any time in the event of an urgent need elsewhere.

All the evacuations had been carried out according to plan, without the enemy immediately noticing. With the clearing of the coast, the real tasks of the navy in Flanders were over. With around 30 cannons of the heaviest caliber, including five 38 cm and four 30.5 cm, as well as around 50 guns from 21 to 10.5 cm in place, the Marine Corps had prevented every attack from the sea since the autumn of 1914. 350

10. The end of the war in the North Sea

Strong fighting units of the English fleet had never ventured within the gun range of the naval defenses of Flanders; protection of the right flank of the land front had been in the firm hands of the Marine Corps; Blocking attempts by the English in Zeebrugge and Ostend had been repulsed; the enemy could not damage the U-boat bases. The submarine flotilla Flanders under the F. d. U. Flanders, Korvettenkapitän Bartenbach, had had 37 Uboats in their area at the same time as the highest figure. The share of these U-boats in the total result of the U-boat war was more than 20% amount; in the difficult conditions of the English Channel, U-boat losses had always been higher than in the other theaters of war. Two flotillas of large torpedo boats and numerous minesweeping boats had continuously supported the submarine warfare. These boats were primarily used against English anti-submarine warfare; numerous night advances into the Channel and on the English coast as well as the shelling of fortified places had served the purpose of keeping the English anti-submarine defense in suspense. Security and reconnaissance service for the extensive mine clearance activities had formed the content of the daily work. In the case of the torpedo boats, too, the number of damage and losses sustained by mine and bomb hits was significantly higher than in the other naval theaters.

The Flanders Marine Corps, under its tough, committed Commander Admiral, could look back with justifiable pride on the mission accomplished on the Flanders coast. Admiral von Schröder issued the following corps daily order on October 17, 1918:

"By order of the Supreme Command, the Marine Corps will evacuate its present fighting positions in order to be led into new lines of resistance.

The Marine Corps has held the coast of Flanders and the adjoining land fronts for four years now without giving up a foot of land, and has completely fulfilled its task of protecting the armies of our western front.

If the troops are now drawn out of their strong positions undefeated, they may leave them with a proud sense of faithful, valiant discharge of duty. No overwhelming fleet of the allied opponents dared to attack the impregnable sea-fortress of Flanders in earnest, and the Marine Corps would have continued to hold the coast indefinitely.

In the difficult task of evacuating and retreating that is now imminent, I expect that the old discipline will show itself in a clear light; therein lays the test of the efficiency of leaders and troops.

Defiantly we move into new positions in which we want to prove our old courage to fight. Finally, it is with high and grateful recognition that I commemorate the floating forces today. Inspired by a spirit of self-sacrifice and aggression, they have been the terror of our enemies far into the open seas throughout the years. They upheld the honor of the flag to the last day."³⁵¹

* * *

Cessation of U-boat war

In view of the dubious success of the armistice offer, Admiral Scheer took the position that the Navy should retain its fighting capabilities. As a means for this he saw the maintenance of the large submarine construction program and the continuation of the submarine war.

It was not until the evening of September 30 that Admiral Scheer learned from the Kaiser that State Secretary von Hintze had been commissioned to make a peace démarche during which the U-boat war would have to be suspended; the Admiral expressed his surprise to the Kaiser that the State Secretary of the Foreign Office had not heard him before as Chief of the Admiral's Staff.

The question of continuing the submarine warfare during the armistice did not rest in the days that followed. On October 1, Vice-Admiral Ritter von Mann, the newly appointed State Secretary of the Imperial Naval Office, informed the Chief of the Admiralty that he fully understood the demand to continue the U-boat war unaffected by the armistice. Nevertheless, he asked the Chief of the Admiralty to agree to the contrary request of the Foreign Office, since the coming about of an armistice depended on this and a resumption of hostilities for Germany was completely impossible. In his view, the prerequisite for Admiral Scheer's previous negative attitude would therefore no longer apply. After receiving this information, the Naval War Staff tried to get an idea of whether the assessment of the Army situation, which was the basis for the opinion of the State Secretary of the Imperial Navy Office, corresponded to the facts. Information obtained from the O.H.L. via Colonel Heye confirmed that peace had to be made, that all divisions on the western front were deployed at the time and that there were no longer any reserves. If, as a matter of course, you are forced to keep fighting, there is no prospect of an improvement in the situation. On the basis of this state of affairs, Admiral Scheer decided to give his consent to the cessation of submarine warfare during the armistice, but strongly recommended using the submarine warfare as a means of pressure to obtain something in return. A corresponding assessment of the situation, which justified Admiral Scheer's agreement to the cessation of submarine warfare during the armistice, was issued by the S.K.L. to the immediate offices of the Navy and the O.H.L.

This grave decision had to be taken by Admiral Scheer on October 1, while he was conferring with the S.K.L.'s Chief of Staff, Captain z. S. von Levetzow, part of his staff, appointed Vizeadmiral Ritter von Mann, who was appointed Deputy State Secretary of the Imperial Navy Office on September 22, and representatives of industry in Cologne to discuss the large submarine program.

On October 9, Admiral Scheer had instructed the deputy chief of the Admiralty to represent the position of the S.K.L. to the Reich Chancellor in such a way that the order to end the submarine warfare could only be given after the armistice had been signed and in exchange for the highest possible counter-performance by the enemy. ³⁵²

10. The end of the war in the North Sea

At the crucial October 12 session, at which the German government's position on President Wilson's October 8 reply note was discussed, Vizeadmiral Ritter von Mann expressed the severe strain on naval warfare if it were to follow Wilson's demanded retreat to the German borders should come to fight again; he pointed out the danger threatening the German industrial area from enemy cannon and planes and the danger to which the U-boat base in Emden and the naval base in Wilhelmshaven were exposed if the Entente penetrated the Scheldt through Holland. He also drew attention to the enormous advantage for the Entente that would result from the cessation of submarine warfare in the event that the peace negotiations were broken off again. For us that means a loss of sinkings of 4 to 500,000 tons per month. The only offensive weapon that we still have and that would lead to a good peace would be paralyzed with certainty. These fundamental statements, which could no longer influence the opinion of the O.H.L., coincided with the view of the Chief of the Admiralty.

With President Wilson's reply of October 14, the question of giving up or reducing submarine warfare came to an acute stage. After careful consideration, Admiral Scheer formulated his position on this issue on October 16 as follows:

- 1. Restricting the use of submarines to cruiser warfare or excluding passenger ships means technically the same as complete cessation. Reasons are obvious.
- 2. With the cessation of submarine warfare, we are relinquishing the last offensive means that we still have at our disposal if the arms operations continue.
- 3. Nevertheless, the Navy is willing to make this sacrifice with a heavy heart if a ceasefire is reached, as the army needs. The Navy doesn't need a truce.
- 4. The probability that the government's agreement to unrestricted submarine warfare can be regained if hostilities continue or resume is extremely small.
- 5. The binding of the High Seas Forces through the submarine warfare, of which they form the backbone, is thus eliminated. The Fleet regains its operational freedom.
- 6. It is impossible for the fleet then to remain inactive in the final struggle which precedes an early or later armistice. It must be used. Even if it is not to be expected that the course of events will experience a decisive turn as a result, from a moral point of view it is a matter of honor and existence for the Navy to have done its utmost in the last fight.

This point of view was vigorously defended and not abandoned by Admiral Scheer during the next few days in negotiations with the Kaiser and the new Imperial government.³⁵³

Page 337 Intended use of the High Seas Fleet

On October 20, 1918, however, President Wilson was informed that all U-boat commanders had received orders excluding torpedoing of passenger ships. The U-boat war was thus given up for political reasons even before the armistice, after Admiral Scheer had repeatedly tried between October 16th and 20th to enforce the unrestricted continuation of the U-boat war at least until the beginning of the armistice. On the evening of October 19, Admiral Scheer explained to the Chancellor in a meeting with the government departments involved that unconditional protection of passenger ships meant the actual cessation of submarine warfare and that it would then be better to stop the entire submarine warfare sacrifice, especially since the freedom of action for unrestricted submarine warfare will no longer be regained. Faced with the Chancellor's position, which could no longer be shaken, Admiral Scheer had finally declared himself willing to make this sensitive sacrifice for the army, but emphasized that he could only do so if the O.H.L. demanded it. In response to a telegraphic inquiry, the latter had not agreed to the abandonment of the U-boat war in the reply note, otherwise left the decision to the Imperial leadership. Admiral Scheer's attempt to have the Kaiser influence the government's decision in a Crown Council, which he considered disastrous, failed because the Kaiser, after some back and forth, agreed with the Chancellor. Despite his greatest personal commitment, Admiral Scheer was unable to assert his position, which he had never given up, in all the positions considered to be decisive. All the representations made with the utmost energy by Admiral Scheer had been in vain.

In a final personal meeting between the Reich Chancellor and Admiral Scheer on October 20, Admiral Scheer pledged the fullest loyalty of the Navy to the Chancellor at his request to comply with the unalterable and proved this promise by immediately recalling all those submarines at sea involved in the trade war. During this meeting, the Chancellor expressed his skepticism about the resumption of unrestricted submarine warfare. While he didn't deny the possibility, he said it was extremely unlikely. Admiral Scheer emphasized the special importance of the final decision on the limitation of U-boat warfare, because operational measures of the S.K.L. depended on it. He stated to the Reich Chancellor that the High Seas Fleet was no longer restricted in its operational freedom as a result of the abandonment of U-boat warfare.

On October 22, Admiral Scheer also gave General Ludendorff his view of the changed strategic situation in the naval war. He stressed the need for the High Seas Fleet to be deployed before it became an object of trade in an ignominious peace. The Fleet must not remain idle, especially now that rations are fighting the hardest. A fleet operation in operational connection with the now available submarines could very well be expected to be successful and would give the homeland a boost.

The use of the High Seas Fleet now became the central operational issue.³⁵⁴

10. The end of the war in the North Sea

The long-standing connection between the High Seas Fleet and the U-boat war had ceased, and the U-boats freed from the trade war were now available to the Fleet Commander for military use against the Grand Fleet. A new strategic situation that occurred on October 20, 1918 required new decisions.

As early as October 16, a meeting had taken place in Berlin between the Chief of Staff of the Naval War Staff, Kapitän z. S. von Levetzow, and the Chief of Staff of the High Seas Forces, Konteradmiral von Trotha, took place in which Kapitän z. S. von Levetzow had presented the result of the S.K.L.'s considerations regarding a possible deployment of the High Seas Fleet. The question of whether Admiral von Trotha assessed the structure of the Fleet in terms of personnel and material in such a way that a larger operation could be risked with her at the moment was answered unreservedly in the affirmative by Admiral von Trotha and at the same time presented an operational plan for a fleet advance into the English Channel, which he intended to submit to the Chief of the Naval War Staff on behalf of the Fleet Commander. The plan was to apply in the event that U-boat warfare had to be stopped without an armistice being exchanged. When it was subsequently presented, Admiral Scheer's plan of operations was fully approved. However, the execution of the naval operation should only be ordered by the S.K.L. if it was not possible to continue the submarine warfare.

This operational plan became of utmost importance on October 20, 1918.

* * *

With increasing tension in the overall situation, the fleet commander, Admiral von Hipper, had put all High Seas Forces into a state of higher readiness at the end of September (1), repairs were canceled and High Seas Forces in the Baltic Sea were recalled to the North Sea. On the morning of October 1, the Fleet Commander was able to report the meeting of the High Seas Fleet in the North Sea to the Chief of the Admiralty.

Large parts of the High Seas Fleet were involved in accommodating the torpedo boats and submarines returning from Flanders at the border of the English restricted area. By October 2, the naval forces returning to the North Sea had been picked up by the High -Seas Forces without any particular incident and brought to North Sea ports on the minefree routes that were constantly being searched, especially Route 500. The Barriers 122 and 124 thrown on Route 500 on September 27 and October 2 with a total of 736 mines had been passed without damage on September 30 by part of the returning Flanders forces, as well as the covering forces. The last 6 torpedo boats of the III. The Torpedo Boat Flotilla and 11 A-II and A-III boats of the Flanders Torpedo Boat Flotilla were picked up by the 18th Torpedo Boat Half-Flotilla near Ameland on the morning of October 2, after avoiding barrier 123 (356 mines) thrown on October 1 while steering close to shore in relatively calm seas.

1) See p. 307. 311 f. 355

Page 339 The Flanders Forces are taken up at great expense

On October 3, the I and III Barrier breaker Group picked up 4 U-boats returning from Flanders on route 500 as planned. After the intake, "S 34", the command boat of the 18th Torpedo Boat Half-Flotilla (Kapitänleutnant Köhler), which stood up and down with the boats "S 34", "V 28", "S 33" awaited the returning barrier breakers, in 238 K left center at 2:55 a.m. on October 3rd ran on a mine of barrier 124, which had been thrown shortly before midnight, and sank a few minutes later after two heavy detonations, losing 70 lives, including the commander, Oberleutnant z. S. König. The night was very dark; Wind SW 5, hazy, very high swell. During the salvage work, 21 men, including the half-flotilla commander, were rescued. They had gathered on rafts, which were picked up by cutters from "S 33" (boat officer Oberleutnant z. S. Laporte) and "V 28". It was a coincidence that the English minesweeper, consisting of "Abdiel" and 8 destroyers, did not come into contact with the 18th Torpedo Boat Half-Flotilla after Barrier 123 had been thrown.

At 9:45 a.m. on October 3, "S 33" (Kapitänleutnant Schmidt, Christian, who was detached to lead the search for the floating life rafts), was torpedoed by the English submarine "L 10". Some time later as "L 10". appeared in close proximity, it was fired on by "S 33", "S 52", "S 60", "V 79" of the IX Torpedo Boat Flotilla (Korvettenkapitän Ehrhardt; and the picket boats "Senator Lattmann" and "Falkenhayn" under fire and destroyed. "S 33" could not be stopped due to deformations and leaks in the bulkheads between departments III and IV, which caused the rear turbine to quickly fill up. 6 men, including 2 rescued from "S 34", were taken on board. Initiated towing attempts were abandoned and "S 33" sunk by torpedo fire.

The 8th Escort Half-Flotilla (Oberleutnant z. S. d. R. von Horn), which set out in the night of October 4/5 to pick up U-boats, ran into in 137 K mines of the Barrier 122. Outpost boat "Johannes Thode" (Lieutenant z. S. d. R. Bahlinger) and "T 122" (Obersteuermann Falk) were hit by mines and sank. 12 men from "T 122" and 2 men from "Johannes Thode" fell. The 8th Escort Half-Flotilla anchored and requested assistance, which was provided by the 1st Torpedo Boat Half-Flotilla and 1st Minesweeping Half-Flotilla, backed by IV Squadron. The 1st Torpedo Boat Half-Flotilla found "Johannes Thode" in a sinking condition and took the commander on board with 8 men. Furthermore, the steamer "Ammon" of the II. Minesweeper Flotilla sent for further support; due to bad weather, which became a severe SW storm during the day, this assistance failed. On the morning of October 5, on the way back, the picket boat "Seezunge" (1) ran into a mine at barrier 122 and sank after 15 to 20 seconds, losing 12 men.

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¹⁾ The name of the commander cannot be determined. 356

10. The end of the war in the North Sea

The commanders and crews of the escort boats "Geheimrat Schütt" (Lieutenant z. S. d. R. Grabbe), "Seeteufel" (helmsman Götsch), "Elmshorn" (Head helmsman Schenk), "Apenrade" (helmsman Breckwoldt), "Hein Godenwind" (Senior Mate Tensfeldt), "Neumeyer" (Steersman Millhagen) and "Mayor Adickes" (Senior Mate Rasch) have with full commitment in the minefields in very rough sea - wind force 9 - a large number of people of the boats "T 122", "Johannes Thode" and "Seezunge" were rescued..

Barrier breakers "Gertrud" and "Rio Negro" had marched on to the NW to pick up the submarine on Route 500 after the half-flotilla had stayed behind. In squares 238 K and 339 K they observed combat action, dodged and entered via 392 K, 41 K, 2939 L and 2485 L. The picket boat "Oberbürgermeister Adickes" of the Ems picket flotilla (Kapitänleutnant Fredersdorf), which was designed to approach in 238 K, determined that enemy torpedo boats were attacking the picket boat "Bremerhaven" (helmsman Hagemann) of the Ems Picket Flotilla, which was in 339 K to approach, had destroyed around midnight. The first volley of the 4 attacking destroyers had swept the only gun overboard, so that "Bremerhaven" could not return fire. The commander of the outpost boat "Bremerhaven" and 8 men had left the sinking boat under heavy enemy fire and initially got into Rafts, then rescued in cutters. The attitude of the crew, from which 17 men died, deserved full recognition. The intake of the submarines could not be carried out because of mine contamination on Route 500. The U-boats now entered the Baltic Sea as ordered. The B.S.N. received orders to work on Route 500 with only a half-flotilla and to clear Route 750 by all means.

The Fleet Commander's assessment of the situation at this critical time is clearly evident from entries in the war diary of the High Seas Fleet, which were recorded on October 6 by the Chief of Staff, Konteradmiral von Trotha, as "Deliberations in a serious hour":

- "1. Now, too, all other considerations must be preceded by the following: "How can U-boat warfare be kept to its greatest effect?"
- 2. The fulfillment of this main requirement requires the Fleet to secure minesweeping and mine clearance and escort tasks, cover the submarine bases in the North Sea, general support for our position in the North Sea and in relation to Denmark.
- 3. Thus the Fleet is bound by the U-boat war; a push by the entire High Seas Force to seek success on the water, even at the risk of full commitment, would mean giving up the basis for submarine warfare.
- 4. Such a use is therefore only possible:
 - a) if the enemy breaks into the German Bight or the Belt,
 - b) when submarine warfare is completely abandoned,
 - c) if serious damage to the English naval power promises more advantages for us than the continuation of the submarine warfare, or
 - d) otherwise our Fleet will meet an ignominious end. 357

Page 341 Fleet commander's assessment of the situation

- 5. Such a final battle is the Fleet's highest goal, so that it does not have to end this war without the national strength it contains having had a full impact.
- 6. Out of an honorable battle of the Fleet, even if it becomes a death struggle in this war, a new German Fleet of the future will grow if our people do not fail nationally at all of a Fleet chained by shameful peace, the future is broken.
- 7. The decision on these questions must come from the highest authority. The High Seas Fleet is such an essential element of government strength in these final hours of war that the Commander-in-Chief of the Fleet cannot readily determine from his standpoint when the moment comes to play it."

The fleet commander assessed the strength of the high-seas fleet as necessary to carry out the submarine warfare at a minimum

4 groups of capital ships of 5 ships, 2 groups of small cruisers of 4 cruisers, 8 torpedo boat flotillas and approximately 6 airships.

Personnel donations or decommissioning to facilitate the large submarine program could therefore only come into question to an insignificant extent.

From October 6, the readiness of the High Seas Fleet was relaxed again after the Flanders Forces had been taken in except for a few U-boats. "UC 71" was the last Flanders boat to enter the Baltic Sea on October 11. In the next few years, individual High Seas Units were again detached to exercises in the Baltic Sea.

The minesweeping work, carried out with the greatest energy, suffered greatly from bad weather, which ruled out any minesweeping activity between October 5th and 11th. On October 12, minesweeping was resumed when the weather calmed down; and bad weather patrols kept the German Bight under control. Only on October 2nd was minesweeping possible for a few hours - for the first time since September 6th, 1918. On October 13th "M 42" (Lieutenant z. S. d. R. Sievers) of the 2nd Minesweeping Half-Flotilla ran when working on Route 760 on a mine of the barrier (1). The boat could be kept afloat and brought to Bremerhaven, the commander and 3 men were killed, 9 men were wounded. On October 14 at around 4 p.m., "M 22" (Senior Helmsman Richter) of the 2nd Minesweeping Half-Flotilla also hit on Route 750 with a mine from Barrier 118 with the clearing device. The mine struck the boat and detonated under the forward shelter. "M 22" sank in 2 minutes with the loss of 10 men, the rescued commander succumbed to his severe injuries. 358

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1) Number not ascertainable.

10. The end of the war in the North Sea

On October 27, "M 78" (Leutnant z. S. d. R. Weber, Johannes) of the 4th Minesweeping Half-Flotilla in lock 78 and "M 18" (i. V. Leutnant z. S. d. R. von Möller) of the 2nd Minesweeping Half-Flotilla in Barrier 88 damaged by mine detonations. However, both boats could be brought in without any loss of personnel.

The minesweeping work was carried out successfully and without losses almost daily until October 29 with the aim of keeping the German Bight open to prospective movements of the High Seas Fleet. To secure the small units at sea, aircraft reconnaissance took place on 16 days in October. Only on October 24th were major movements of enemy light naval forces—cruisers, destroyers, S-boats—observed and reported off Terschelling.

English mining activity in October 1918 was limited to throwing 4 barrages:

Barrier 123 at Texel against the returning Flanders forces,

Barrier 125 and 126 before Route 750,

Barrier 124 against Route 500.

Within the mine belt, no more mine barriers had been carried in by the enemy, so that there was a certain freedom of movement in the inner German Bight. Searched communication routes made it possible to shift Fleet forces at any time, especially from the northern outlet route to the western one, in the event of attacks on the Ems. The total number of English mines laid in the German Bight in 1918 was 21,112 against 23,012 by the end of 1917.

Immediately after the German note of October 20, 1918 was sent, in which President Wilson was informed that passenger ships should not be torpedoed in future, the Chief of Staff of the Naval War Staff, Kapitän z. S. Levetzow, from Berlin to Wilhelmshaven, to get in touch with the Fleet Commander about the Fleet's planned operation. On the morning of October 22, Kapitän z. S. von Levetzow transmitted the following oral order from the Chief of the Admiralty to the Chief of the High Seas Force, Admiral von Hipper: "High Seas Forces are to be deployed to attack and strike against the English Fleet." Kapitän z. S. von Levetzow added that the action of the Fleet should not be delayed. At the further discussions two plans were put forward by the Chief of the Fleet: one directed towards the east coast of England, the other towards the English Channel. Admiral von Hipper preferred the latter because only here a really vulnerable point of the enemy could be hit and the encounter with stronger enemy forces would in all probability take place in a sea area favorable for us - for example near Terschelling. Kapitän z. S. von Levetzow completely agreed with this view, since the appearance of the German Fleet in the Channel must be particularly effective just now and agreement that the soonest possible date was necessary for the undertaking and that the matter was considered to be of the utmost urgency. It was confirmed to the Fleet Commander that he could freely dispose of returning U-boats within the framework of the intended operation.³⁵⁹

Page 343 Operational Considerations for Fleet Deployment

During further discussions with the representatives of the Naval War Staff, the Chief of Staff of the Fleet pointed out that the overall situation could not be surveyed from the Fleet. As far as it could be overlooked, doubts still existed as to whether the use of the Fleet, which of course was desirable from a military point of view, was now the right thing to do. It would be wrong if, after all, the fight were to be continued as a whole, because then the only effective means of warfare that we still had, the submarine, could no longer be used effectively, since it lacked the secure protection of its base absent from the Fleet. The deployment would still be wrong if it were to go against the overall intentions of the O.H.L. and the Reich leadership. Kapitän z. S. von Levetzow, on the other hand, emphasized that the Chief of the Admiralty would assume full responsibility for the operation. The Kaiser and Reich Chancellor were expressly informed that the Fleet would be given a free hand for other uses when the U-boat war ended. The O.H.L. had asked several times whether the Fleet could not do anything else; they would also be informed.

These statements removed the doubts expressed by Rear Admiral von Trotha. On the afternoon of October 22, Kapitän z. S. von Levetzow took part in a meeting of the operations department of the naval staff with the Commanders of the Torpedo Boats and Submarines, as well as the Commander of North Sea Security about the intended operations. It was agreed that an officer of the Naval Staff should go to the Naval Operations Staff as soon as possible with the operational order ready. Following this meeting, another internal discussion took place between the Chief of Staff of the High Seas Fleet, Konteradmiral von Trotha, and the Chief of Staff of the Naval War Staff, Kapitän z. S. von Levetzow, with the participation of a few Admiral Staff officers. Kapitän z. S. von Levetzow again explained Admiral Scheer's opinion in detail and his identical view by emphasizing that according to the impressions gained in Berlin the fight to be resumed after the armistice would last at most 4 to 6 weeks, so that the U-boat war, if it comes to life again at all, remains ineffective. Admiral Scheer had taken full responsibility for the order he had sent to the Fleet and now considered it imperative that the Fleet be engaged in the final battle. Konteradmiral von Trotha again professed the same view and then asked for information as to how far other authorities had been informed of Admiral Scheer's decision. Kapitän z. S. Levetzow replied that the notifications from other authorities, insofar as they were necessary, were limited to the general information from the Chief of the Admiralty, that by ending the submarine warfare the fleet would be freed from its shackles and free again in its operational use. This had been brought to the knowledge of both the Kaiser and the Reich Chancellor. The Kaiser had agreed to what Admiral Scheer had said. Konteradmiral von Trotha declared that he was thoroughly satisfied with these statements. Reasons for and against the possibility of the Kaiser embarking on the Fleet for the operation were then discussed.³⁶⁰

10. The end of the war in the North Sea

The Operational Order for the Fleet operation in the English Channel was brought to the Chief of the Admiralty on October 27th during the return trip from Berlin to Spa in Cologne. The operation was planned for the days around October 29th and was approved by the Chief of the Admiralty. It was known from the enemy that the main part of the enemy forces were in east Scottish ports, with branches in the Tyne, Humber and Channel. The enemy should be put up for battle under favorable conditions for us. For this purpose, a night advance of the Entire High Seas Force in the Hoofden with attacks against enemy forces and against the traffic under the Flanders coast and in the Thames estuary was planned. This was intended to induce the enemy to immediately advance parts of the Fleet in the direction of the Hoofden-German Bight line of communication. The Fleet Commander intended to put these enemy Fleet units up for battle on the evening of the second day of operations, or to attack them with the torpedo boats during their advance in the night from the second to the third day of operations. To support the main task, the enemy's approach routes from the east Scottish ports to the sea area near Terschelling were to be contaminated with mines and occupied by submarines.

Tactical structure of the high seas forces at the end of October 1918

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Ships of the line:
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Fleet flagship: "Baden"

I. Squadron.

"Ostfriesland" [4], "Thuringia", "Posen" [4], "Nassau", "Oldenburg", "Westfalen", "Helgoland".

III. Squadron.

"König" [□, "Bayern", "Großer Kurfürst", "Kronprinz Wilhelm", "Markgraf" [▷.

IV Squadron.

"Friedrich der Große", "König Albert", "Kaiserin", "Prinzregent Luitpold", "Kaiser".

Cruisers:

I. Reconnaissance Group.

"Hindenburg" [1], "Derfflinger", "Moltke", "Von der Tann", "Seydlitz".

II. Reconnaissance Group.

"Königsberg" , "Karlsruhe", "Pillau", "Nuremberg", "Cöln", "Dresden", "Emden" (B. d. T.), "Graudenz".

IV. Reconnaissance Group.

"Regensburg", "Frankfurt', (II. F. d.T.), "Bremse", "Brummer", "Straßburg", "Stralsund". Assigned: "Arkona", "Möwe". 361

Last war formation of the High Seas Fleet.

Torpedo Boat Flotillas:

- I. Flotilla.
 - 1. Half flotilla: "V 129" "G 39", "G 86", "G 40", "G 38", "S 32".
 - 2. Half flotilla: "V 130", "S 133", "S 135", "S 134", "S 139".
- II. Flotillas.
 - 3. Half flotilla: "G 101", "G 104", "V 100", "G 103", "G 102".
 - 4. Half flotilla: "B 97", "B 111", "B 109", "B 110", "B 112".
- V. Flotilla.
 - 9. Half flotilla: "G 11", "V 6", "V 3", "V 2".
 - 10. Half flotilla: "G 8", "G 10", "V 5".
- VI. Flotilla.
 - 11. Half flotilla: "V 128", "V 127", "S 132", "S 131", "V 126", "V 125".
 - 12. Half flotilla: "V 43", "V 45", "V 44", "S 49", "S 50", "V 46".
- VII. Flotilla.
 - 13. Half flotilla: "S 138", "V 83", "S 65", "V 78", "S 56".
- VIII. Flotilla.
 - 15. Half flotilla: "T 180", "T 193", "T 192", "T 195", "T 190", "T 189".
 - 16. Half flotilla: "T 178", "T 179", "T 176", "T 186".
- IX. Flotilla.
 - 17. Half flotilla: "V 80", "S 52", "S 51", "S 60", "S 36".

Submarines:

25 Submarines.

Airships:

"L 65", "L 64", "L 63", "L 52", "L 61", "L 56", "SL 22".

The implementation was intended as follows:

- 1. Departure from the German Bay from the view of the Dutch coast during the day.
- 2. Advance through the Hoofden, attack on the Flanders coast and the Thames estuary at Hell Werden on the second day of operations.
- 3. Attack:
 - a) against the Flanders coast by I. F. d. T. with "Graudenz", "Karlsruhe", "Nürnberg" and II. Torpedo boat flotilla,
 - d) against the Thames mouth by the leader of the II. Enlightenment group with "Königsberg", "Cöln", "Dresden", "Pillau" and 2nd Torpedo Boat Half Flotilla. Coverage of the Flanders group by the Main Body, the Thames group by the B. d. A. with the I. Reconnaissance group. 362

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- 4. The return march was intended in such a way that the area near Terschelling, which the High Seas Fleet was aiming for as a battlefield, was to be reached 1 to 2 hours before dark on the second day of the operation.
- 5. The mine infestation on the enemy's approach routes was assigned to the leader of the IV Reconnaissance Group with the IV Reconnaissance Group reinforced by "Arkona" and "Möwe" and the VIII Torpedo Boat Flotilla.
- 6. If no encounter with the enemy has taken place by the night of the second to third day of the operation, torpedo boat advance under the command of the B. d. T. of Terschelling lightship towards Firth of Forth.
- 7. Airship reconnaissance if possible.
- 8. The phasing out was intentional in the order:
 - a) B. d. A. with I. and II. Reconnaissance Group, II. F. d. T., II Torpedo Boat Flotilla, 2nd Torpedo Boat Half-Flotilla and 13th Torpedo Boat Half-Flotilla.
 - b) Large: III. Squadron, Fleet Flagship, B. d.T., I. Squadron, IV. Squadron. The torpedo boat flotillas not specifically mentioned under the instructions of the B. d. T. distributed to the associations.
 - c) IV. Reconnaissance Group with "Arkona", "Möwe" and VIII. Torpedo Boat Flotilla. The top of the III. Geschwader was supposed to pass the outer Jade lightship on the first day of the operation at 8 a.m. at a speed of 14 nm; the ship distances were set at 700 m, the formation distances at 3500 m.
- 9. Brown Route to 401, then 129 K center left, 279 K bottom left corner, 428 K bottom left corner, then 677 K center left should be used as the exit path.
- 10. Advancing curve from 677 K center left over 171 K bottom left corner to 963 K bottom left corner. From here the leader of the I. Reconnaissance Group and B. d. A. after Black Deep, the II. F. d. T. push against the Flanders coast, the Main Body from 963 Karls south to about 51° 40' N advance.
- 11. The F. d. M. transferred to "Augsburg". Of particular importance was the intended participation of about 25 U-boats, which would provide rear cover for the High Seas Fleet and damage enemy naval forces before and after the battle. The U-boats were divided into 6 U-Lines:
- a) Line I (4 boats): 860 E above

799 E above 738 E center

677 E center right

b) Line II (3 boats): 607 E center below

546 E middle above 485 E top right³⁶³

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Page 347 The High Seas Fleet does not run out.

c) Line III (3 boats): 662 5 center left

661 5 bottom left

2349K middle

d) Line IV (3 boats): 2098 K center left

2198K bottom right

2247K middle

e) Line V (6 boats): from 1870 E right top

1861 E bottom right

boat distance 10 nm

f) Line VI (6 boats): from 1297 K mid to

1691 K center

boat distance 10 nm

The submarines were ordered to engage fully against warships and not to wage a trade war. Every opportunity, even the most unfavorable one, was to be exploited, and as far as possible three-shots were fired at battlecruisers and ships of the line. Torpedoes should not be conserved.

On October 27, October 30 was ordered as the first day of operations. In the following days, the submarines sailed to the places ordered. The assembly of the High Seas Forces at Schillig Reede was ordered for October 29th.

As usual, the operational intent was disguised by the fact that evolution was scheduled for October 30th.

The planned departure for the early morning hours on October 30th of the High Seas Forces, which were partly prevented from meeting at Schillig Reede because of fog, had to be postponed because of bad weather.

In the course of the afternoon of October 29th, and then during the night of October 29th-30th, serious disciplinary excesses and insubordination occurred on some cruisers and capital ships without there having been any indication of this. During October 30 and the following days, the seditious movement continued to spread. On October 31, 1918, due to the disciplinary incidents, the Fleet Commander refrained from setting sail with the Fleet for the planned advance and detached the individual units to the Baltic Sea, Elbe and Jade as planned.

On November 11, 1918, the armistice signed in Marshal Foch's saloon car at Compiegne came into force. 364

A Seaman's Prayer

Heavenly Father, creator of the seas, Bless us as we assemble for this most solemn remembrance. We give you thanks for all your servants who go to sea in ships and those who have paid the supreme sacrifice by giving their lives in the service of their nation.

"Dulce et decorum est pro patria mori. — Horace

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